

# SHIPS OF THE STAR FLEET

*AKYAZI-Class Perimeter Action Ships*

*Volume Two/Number One*

*One hundred and third year of issue*

**2290-91**

The standard reference guide to the vessels of the Star Fleet

# **Ships of the Star Fleet**

ONE HUNDRED AND THIRD EDITION

*Volume Two/Number One*

**By Calon Riel**

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for Honor

"I would lay down my life for America,  
but I cannot trifle with my honor."

*John Paul Jones*  
*4 September 1777*

# Contents

Preface

- 01** Evolution of the Akyazi Class
- 02** Class Deployment
- 03** Ship Classifications
- 04** Glossary

Perimeter Action Ships

- 05** Akyazi group
- 06** Akyazi/Arbiter group
- 07** Akyazi/Akula group

Appendix

Akula group -  
Internal Arrangement  
Systems Details

# Preface

This volume of *Ships of the Star Fleet* illustrates the changing nature of Star Fleet's primary mission over the past ten Earth-years - from a primarily exploratory posture to, unfortunately, a predominantly defensive one. Beginning with the apparent withdrawal of the Organians in the early 2280s and followed by the consolidation of power within the Klingon Empire shortly thereafter, Star Fleet's direction was all but assured when Klingon vessels attacked Federation merchant ships in the Taal Tan region in 2283.

Initiating a combat action that would officially last for more than five months, the Klingonese forces attacked quickly and without warning, all but destroying three merchant convoys while taking 617 lives. Federation response, though swift, was predicated on the attack being an isolated incident. Two days passed before outpost stations received a hyperlink communique indicating that starships *Lafayette* (CH 1720), *Wasp* (CH 1721), and *Tori* (CH 1725) had engaged and defeated the Klingon hunter-killers *K'chss* and *K'utuul* (and a number of lesser craft) at Linze. A full mobilization ensued. Within six days the scope of the Klingon offensive was known, and Star Fleet units were engaging hostile forces all along the disputed Klingon border and at seemingly random spots in subquadrants two south and three south. The hostilities continued until November of 2283; Star Fleet lost 26 Class One starships as well as 5500 personnel and numerous Class Two spacecraft. Klingonese losses were much higher.

During the final week of fighting the heavy frigates *Illustrious* (FH 1863) and *Amiens* (FH 1869) discovered the Romulan outpost Rihanni Tu outside subquadrant four south. Constructed in the middle of an asteroid field, the station had been operational for at least six months. Its clandestine location and relatively small size made it apparent to senior Star Fleet officers and experts in Romulan military history that the sole purpose of the outpost was to collect intelligence information on Star Fleet

strength in the subquadrant four south area. With what would later become known as the Taal Tan Offensive still ongoing, the options available to the Federation at first seemed limited. A cease-fire agreement terminated hostilities with the Klingons four days later, however, and Star Fleet's hand was strengthened considerably. Despite unexpected personnel and spacecraft losses and the need for a continued presence along the Klingon border to maintain the terms of the cease-fire, Class One combat units were now available in larger numbers. While Romulan officials insisted that the station had been established to conduct scientific studies of various stellar phenomena, the Federation demanded that it be abandoned. When the Romulans refused, Star Fleet instituted a blockade of the outpost, severing all supply lines. Romulan representatives engaged in disingenuous politesse for several weeks but finally withdrew without resorting to hostilities.

While the Romulans were somewhat conciliatory, Klingon forces only continued their belligerency. Confrontations continued at an inordinate rate. The Battle of Khatanga and the loss of seven Star Fleet vessels in early 2284; the numerous raids on frontier merchant shipping and the resultant loss of lives and cargo; the Rykla Dagħ Incident of 2285 and the loss of the heavy cruiser *Hood* four months later; the destruction and defeat of Klingon vessels by the *Thach* (FR 1949), *Ability* (FR 1953), and *Avenger* (FH 1860) at Pelarsk in 2286; all served to strengthen Federation resolve.

The result of these and other events was a five-year program of significant and somewhat effective Class One fleet rejuvenation presided over by then Federation Commissioner of the Star Fleet Lars-Erik Valdemar. Despite subdued but continued protestations from the pacifist bloc, an impressive 25 classes (totalling approximately 484 hulls) were authorized for construction or refitting during his tenure, most of these in areas requiring much-needed attention. Borderspace operations platforms (perimeter action ships and similar type construction) and the transport arm of Star Fleet

(transport and transport/tug classes) received necessary help. Further examination of the classes authorized between 2283 and 2288 reveals that only 154 ships (32%) are of a "non-battle force" nature. This includes 109 new transport/tug hulls but only 38 scout and seven exploratory cruiser hulls. The complete numbers appear below.

#### NEW CONSTRUCTION AUTHORIZATION 2283-2288

| Number of Classes | Number/Type                           |
|-------------------|---------------------------------------|
| 1                 | 8 Light Cruisers (CL)                 |
| 1                 | 20 Frigates (FR)                      |
| 2                 | *109 Transport/Tugs (TT)              |
| 3                 | *22 Scouts (ST)                       |
| 1                 | 26 Destroyers (DD)                    |
| 1                 | 14 Heavy Cruisers (CH)                |
| 1                 | 5 Dreadnoughts (DN)                   |
| 2                 | 19 Heavy Frigates (FH)                |
| 1                 | 3 Battlecruisers (CG)                 |
| 1                 | 17 Corvettes (CV)                     |
| 1                 | *16 Superscouts (SS)                  |
| 1                 | 19 Fast Frigates (FF)                 |
| 1                 | 10 Strike Cruisers (CS)               |
| 1                 | 5 Command Ships (CO)                  |
| 1                 | *7 Large Exploratory Cruisers (CKE)   |
| 3                 | 40 Combat Support Ships (SP)          |
| 2                 | 133 Perimeter Action Ships (PA)       |
| 1                 | 11 Large Perimeter Action Ships (PKA) |
| 25                | 454                                   |

\*Indicates non-combat vessels.

These figures illustrate clearly the aforementioned change in the fleet's primary mission profile. Most of the classes indicated are in either the "building" or "planned" stage (only five classes have completed construction), but all of them have the full support of the Military Staff Committee and all will likely be built. Since Valdemar retired his position in 2288, authorization for new ship construction has slowed somewhat; however, the realization of a 1600-ship Class One fleet (with a minimum of 90% [1440] battle force capable units) is still possible by the 2295 target date.

This volume of *Ships* examines one component of the recent additions to Star Fleet's perimeter defense forces: the Akyazi-class perimeter action ships.<sup>1</sup> As with the previous edition, the information in this volume is organized to enable the reader to quickly locate the data desired. The individual vessel listings (which appear in chart form) display a ship's current navigational contact code number, name, builder, date the ship's keel was laid, date the ship was launched, date of commissioning into the Fleet, and current status, respectively. Terran local calendar dates are used where applicable; standard stardates are used in all other instances.

The ship status codes used here have been simplified from the lengthier and more

detailed Star Fleet method. The status code **ATAC** indicates a vessel under the operational jurisdiction of TacFleet. Since all perimeter action ships come under this classification, **ATAC** is the only "active" status code used in this volume. The status note "Lost" indicates a vessel lost in the line of duty. Additional notations are "Building" (for ships under construction as of the date of publication), and "Authorized" (for ships that have been approved but have not yet begun building).

The illustrations accompanying the sub-class sections represent the distinctive insignia of those PA sub-classes. These should not be confused with individual vessel insignia, which vary from ship to ship. The insignia are unique to each starship class (or sub-class) and are accorded "limited approval" status by Star Fleet Command (i.e. they cannot be displayed at official functions or attached to regulation duty uniforms, and they must be deleted from exterior hull surfaces prior to large-scale operations or intelligence assignments). Unless otherwise noted, all vessel illustrations included in this volume are in the 1:875 scale.

The detailed information on the *Akula* sub-class was prepared by Timothy Farrar and Makita Recamier exclusively for the *Ships* series. A majority of the data was drawn from information made available by Star Fleet; where classification restrictions were encountered, experts in Star Fleet design philosophy were consulted to provide educated conjecture.

The publishers of *Ships of the Star Fleet - Volume Two* are grateful to many individuals and organizations for providing assistance in its preparation. Among these are Sir Kyle Greenleaf, Dyan Tupir, Jameson Hecht, Huss Randon, and Amye Stalt, all of whom provided invaluable data and insight into the design, operation, and current status of perimeter action ships. Also, vital support and assistance was provided by Carlson Rentee, director of the Defense Forces Institute; Carolann Leviere, superdata coordinator for the *Ships* series; and Rear Admiral Krisdulas Min Ar (Star Fleet, retired), contributing technical editor and Star Fleet liaison.

Finally, offering essential data and "course correction" were Commodore C. Paul Steele, Tactical Readiness Division, TacFleet; Oson Salingas, Office of Public Relations, TacFleet Command; Donovan Bosch, Temerand Duplicat; Gregory C. Alhaman, Terran Rockwell; Commander Lena P. Everest, Star Station Praeses; Commander Warren Deely, Star Station Tiran; Lt. Commander Erik Y. Tasano, Star Station Dallas; Lt. Commander Justin H. Cates, Starbase 21; Lt. Commander Brenda Shiver, Starbase 27; Lieutenant Femin E. C. Tinghast, Outpost Principale; Lieutenant Dora Redbear, Starbase 15; and Cameron Yelle, director, *Faron* class design team.

The next installment in this series, *Ships of the Star Fleet - Volume Two/Number Two*, is scheduled for publication in April 2290. Comments, information, or material may be directed to the headquarters of the Defense Forces Institute, located at its Bay Colony complex in the United Americas, Earth.

Calon Riel  
March 2290

<sup>1</sup>The terms "class," "sub-class," and "group" are used somewhat loosely in Star Fleet parlance. For the purposes of this reference work, "class" refers to the Akyazi class as a whole, i.e. including the *Arbiter* and *Akula* designs. "Sub-class" or "group" refers to one of the three design-types individually, as in the *Arbiter* sub-class or *Akula* group.

# **Ships of the Star Fleet**

*Volume Two/Number One*

# Evolution of the *Akyazi* Class

The small but mighty perimeter action ships play an essential role in the realization of modern Federation defense strategies. Based on the concept of "spherical defense" (versus that of "point defense"), these plans provide for complete coverage of the charted perimeter of Federation treaty space. This seemingly impossible task is realized through continuing, detailed probability studies that provide planners with the most advantageous redeployment choices. Patrol combatants (which include those vessels dedicated to spherical defense duty) are deployed in "layers," starting with the outermost reaches of the perimeter where corvettes, clippers, and purpose-built perimeter action ships keep vigil. A second, interior layer providing both fast reinforcement to outer deployments and a second opportunity for initial confrontation consists of perimeter action and large perimeter action ships, strike cruisers, and battlecruisers assigned to outpost protection. Dreadnoughts, destroyers, and heavy destroyers, as well as other starships assigned on an "as needed" basis, patrol the third, innermost layer.

This defensive scheme evolved from lessons learned during the opening stages of the Four Years War, when repeated small-scale Klingon incursions evaded Federation forces concentrated at strategic points. Star Fleet responded by deploying underutilized corvettes and clippers along front lines to delay such incursions and thus provide additional time for a concentrated response. The success of this plan in preventing further loss of space served as a lesson to defense strategists in the final year of the war. Star Fleet development and procurement strategies were accordingly adapted, and in early 2249 the Military Staff Committee approved purchase of 35 *Kiaga* (PA 820) and 155 *Agilis* (PA 855) class starships. After hostilities ended, however, these vessels were expected to perform a number of tasks in addition to that of first-line defense. With so few starships assigned to the perimeter during that period it was necessary for any deployments to, among other tasks, provide rescue services for

deep space missions, perform frontier police duties, and conduct limited surveys. Long-range exploratory and hostile borderspace scanning (missions still carried out by perimeter action ships to a reduced extent) were among the primary duties.

By the late 2260s, enforcement of the Organian Peace Treaty had rendered Federation-Klingon borderspace relatively quiet. The Romulan Neutral Zone, Gorn and Tholian frontiers, and Kznti borderspace, however, were all active with repeated tests of Federation vigilance. It was with these threats in mind that Star Fleet planners proposed building 178 *Akyazi* (PA 1010)-class perimeter action ships along with five strike cruisers of the *Decatur/Belknap* (CS 2500) design. The *Akyazi* class was to reflect both the advances in propulsion technology afforded by linear warp drive and the changed realities of perimeter defense duty. Many of the auxiliary tasks assumed by this type in the past could now be conducted by outposts, monitor stations, and purpose-built starships and Class Two spacecraft. The mission profile for the *Akyazi* class was thus to focus on maximizing offensive capacities geared solely toward delaying potential adversaries.

The significant cost of undertaking the *Akyazi* program caused great consternation among the members of the Federation Council. Funding postponements forced Star Fleet planners to maintain the aging perimeter action force already in place, in part by reassigning secondary duties to other operations platforms. Put on temporary hold in late 2270, the program was put on indefinite hold in late 2273 as a result of the massive cutbacks and reallocations that followed revelations concerning Star Fleet's role in inciting the Kznti Incursion.

The Klingon Taal Tan Offensive of 2283 undermined support for the pacifist bloc on the Federation Council that had managed for ten Earth-years to prevent reconsideration of funding for the perimeter action program. The obvious weakness of the Star Fleet deterrent in the outer reaches of subquadrants two south and three south forced



**TABLE 1-1. PERIMETER DEFENSE PLATFORMS<sup>a</sup>**

| Type/Class                      | 2245 | 2250            | 2255 | 2260 | 2265            | 2270 | 2275 | 2280 | 2285 | 2290 | 2295 | 2300 | 2305 | 2310 | 2315 |
|---------------------------------|------|-----------------|------|------|-----------------|------|------|------|------|------|------|------|------|------|------|
| Various/Strategic <sup>b</sup>  | 61   | 55              | 71   | 83   | 67              | 51   | 32   | 30   | 55   | 71   | 57   | 20   | 30   | 40   | 40   |
| PA 820/ <i>Kiaga</i> class      | —    | 5 <sup>c</sup>  | 35   | 35   | 24 <sup>d</sup> | 20   | 18   | 19   | 34   | 35   | 30   | 15   | 6    | —    | —    |
| PA 855/ <i>Agilis</i> class     | —    | 11 <sup>c</sup> | 139  | 155  | 83 <sup>d</sup> | 76   | 71   | 70   | 147  | 154  | 123  | 74   | 42   | 24   | —    |
| PA 1010/ <i>Akyazi</i> class    | —    | —               | —    | —    | —               | —    | —    | —    | —    | 71   | 102  | 102  | 102  | 102  | 102  |
| PA 1125/ <i>Engage</i> class    | —    | —               | —    | —    | —               | —    | —    | —    | —    | 15   | 28   | 28   | 28   | 28   | 28   |
| PKA 1170/ <i>Kirsanov</i> class | —    | —               | —    | —    | —               | —    | —    | —    | —    | 6    | 11   | 11   | 11   | 11   | 11   |
| Totals                          | 61   | 71              | 245  | 273  | 174             | 147  | 121  | 119  | 236  | 352  | 351  | 250  | 219  | 205  | 181  |

<sup>a</sup>Figures for 2290 through 2315 are projections.

<sup>b</sup>Includes all vessels stationed to perimeter defense duty (corvettes, clippers, etc.) other than the "perimeter action ship" type.

<sup>c</sup>Numbers reflect vessels lost in action during the Four Years War (2246-2250) and replaced by the Military Staff Committee in subsequent appropriations, thus achieving the desired total of 35 *Kiaga* and 155 *Agilis* class starships.

<sup>d</sup>Many perimeter action ships were cycled in and out of the Star Fleet Reserve Force beginning in 2265 as a result of the Organian Peace Treaty and various other factors.

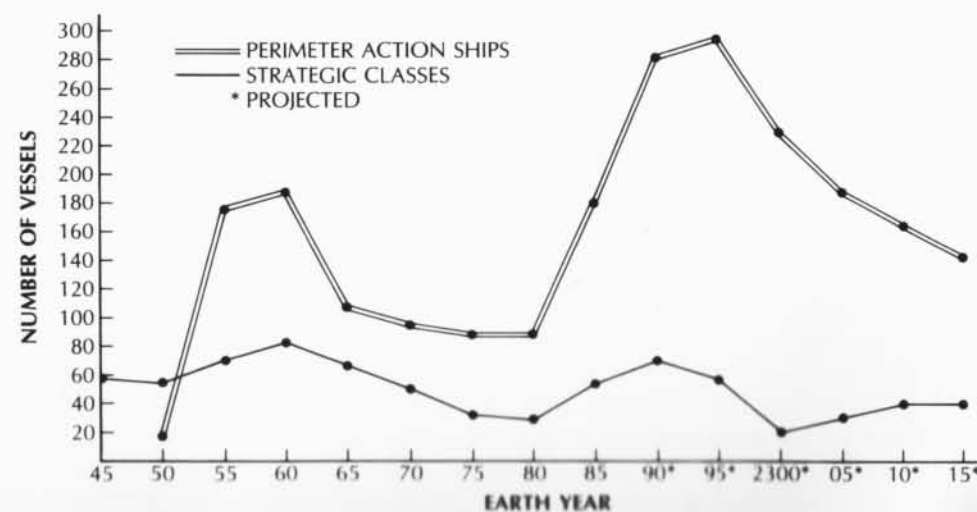
the issue, and thus one of Federation Commissioner Lars-Erik Valdemar's first recommendations upon taking office was for perimeter action force revitalization.

Valdemar's plan was twofold. On the one hand, corvettes and older perimeter action ships were deployed on the frontier until new vessels could begin entering service. Plans then called for the corvettes to be returned to their previous duties, and for the older PAs to begin retiring. On the other hand, a compromise with the pacifist bloc was reached, and approval was won for construction of 141 perimeter action types, including 105 *Akyazi* class starships. The *Engage* (PA 1125) and *Kirsanov* (PKA 1170) classes were also authorized at this time.

Orders for the *Akyazi* class were placed in three lots over an eighteen month period, with the first lot of 38 ships ordered on 17 August 2283. Each lot reflected a design variation, and design variations also exist reflecting component and design improvements made over the course of building the full complement of each "sub-class." The prospective mission profile, however, is the same for all three sub-classes. "Patience, Vigilance, Endurance" is the motto of the *Akyazi* class and describes well the traits needed for service aboard these starships. Their offensive capacities have been tailored to a multitude of delaying strategies. Many offensive systems have been designed for 100% exhaustion, with the defending starship expending maximum power to repel an attack.<sup>1</sup> Deployment limitations necessitate that one *Akyazi* class vessel be capable of sustaining battle with five *K'teremny*-class battlecruisers for thirty minutes, inflicting twenty percent casualties. Only by realizing these projections will the second sphere of defense avoid being overwhelmed and have adequate response time. Similar estimates hold for other threat force opponents. Under such a scenario, the starship (if it survives) will not have the power to return to base. Lifeboat capacities and survival contingencies are therefore more fully developed as part of the mission profile in these vessels.

<sup>1</sup>Scans taken by the heavy cruiser *Enterprise* (CH 1701) during an engagement with an Orion suicide craft (see Star Fleet Record, *History of the Coridan Admission*, Babel Conference, 2264) provided information that allowed for the realization of this design philosophy.

The perimeter action ship will continue to play an important role in Star Fleet defense strategy for the foreseeable future. Present Commissioner T. Sela Arno has pledged full support for the perimeter action fleet and preliminary designs for at least one additional PA class are already in the development phase (*Faron*/PA 8300). However, the fiscal and political problems inherent in constructing and maintaining such a large force cannot be underestimated. Several members of the Federation Council have stated publicly that they will oppose future PA funding as either unviable, unnecessary, or both. At the same time, intelligence indicates that the Romulan military has made great strides in improving their perimeter fleet units, with indications that some of these developments are not yet fully understood by Star Fleet. With the number of perimeter defense platforms in Star Fleet service about to begin declining, a sensible and impartial discourse is required.

**FIGURE 1-1. PERIMETER DEFENSE PLATFORMS 2245-2315**

# Class Deployment

The responsibility of monitoring, patrolling, and defending the more than 3000 perimeter sectors of Federation space is divided among numerous sizes and types of platforms, including outposts, monitor stations, dreadnoughts, corvettes, perimeter action ships, and others. The *Akyazi*-class PAs play a vital role in this mission. On average, each of the 102 individual ships will be responsible for the security of nearly 30 sectors (up from the 29 sectors prior to the loss of three *Akyazi* class ships). These numbers are affected by many factors, however, including the deployment assignments of the other perimeter action ship classes. Also, the deployment of hostile forces at various border areas predetermines Star Fleet strategy in some instances - quadrants two and three receive priority due to the heavy Klingon and Romulan presence adjoining those areas (with subquadrants two south and three south customarily seeing the heaviest PA and strategic platform deployments). Conversely, in areas where no known aggressor force exists, the deployment ratio can range as high as one *Akyazi*-class PA for every 80 perimeter sectors.

Accompanying these different deployments is the need for differing areas of strength on the part of the *Akyazi*-class perimeter action ships. The *Akyazi*, *Arbiter*, and *Akula* sub-classes differ not only in name and date of construction but in speed, weapons capability, and internal and external design as a result of Star Fleet deployment strategy. Although the objective of the *Akyazi* class as a whole is to move from a posture of spherical defense to one of point defense as quickly as possible when necessary, the mission objectives of the different sub-classes are more clearly defined. Ships of the *Akula* sub-class, for instance, are outfitted with enhanced defensive features and more potent weaponry than their sister ships in the *Akyazi* and *Arbiter* groups; although they possess a slower maximum velocity, they are generally assigned to more dangerous deployments. Ships of the *Akyazi* group, possessing great speed, are often assigned to "sparse" deployments, making them responsible for the security of anywhere from 40

to as many as 80 perimeter sectors. Vessels of the *Arbiter* sub-class receive varying assignments to take advantage of both their speed and weapons capacity.

It must be remembered that perimeter action ships are tactical instruments, commanded by an officer with the rank of lieutenant or lieutenant commander. The *Akyazi* class ships (and other PA classes) are part of an overall strategy; however, their function as individual units is tactical, not strategic. All perimeter action ships currently on station are under the direct jurisdiction of TacFleet Command. (TacFleet was established on 07 June 2251 as a separate, specialized service within Star Fleet.)

*Akyazi* class ships are often grouped with combat support (SP) and/or intelligence-type vessels when on military or defense assignments. In areas where an aggressor force is less likely to be encountered, they are sometimes deployed with scientific vessels such as exploratory cruisers and other lesser classes. Most often, however, *Akyazi*-class PAs operate individually, far from the nearest bases or outposts and in great seclusion. This isolation contributes to the image of the ships and their crews as rugged, individualistic loners. In reality, the commanders of these PAs possess only situational autonomy. In most instances, their operational scenario falls well within the TacFleet chain of command.

While the operational flexibility of PA commanders and crews may seem limited, they are afforded significant latitude in the outfitting and "embellishing" of their individual vessels. This freedom is permitted in an attempt to offset the demanding and psychologically strenuous aspects of perimeter action ship duty. Various fleet, squadron, and unit affiliations (as well as individual ship bynames) are displayed in the form of customized insignia and descriptive symbols, freely illustrated on the rear of the ships' warp engines (and in the case of the *Akula* sub-class, on the exterior surfaces of the deflector pod support pylons). Also, the "starburst" deflector grid pattern utilized on some Singapore-built *Arbiter* group PAs was designed by the former executive



officer of an *Akyazi* group ship; it was later approved by TacFleet for inclusion in the *Arbiter* vessels. Despite these freedoms, however, mission requirements impose certain limitations. Regulations permit a maximum of three tonal variations on a gray color scheme for all insignia that are displayed on exterior hull surfaces. This is necessary so as not to negate the advantages inherent in the ship's black and dark gray opalescent hull finishes. The dark hulls both emit and reflect far less electromagnetic energy than the standard white opalescent finish on most Class One starships, making *Akyazi*-class PAs more difficult to detect.

#### PERIMETER ACTION SHIP DEPLOYMENT COMPOSITION

Detailed deployment information regarding the *Akyazi*-class perimeter action ships, as with most front-line Star Fleet vessels, is classified. The information in this section is based on a combination of various elements, including port call records, civilian observations, general information made available by Star Fleet, and historical precedent. Only *Akyazi*-class perimeter action ships are included, although the PA groups listed may also include vessels from other perimeter action classes (especially the *Engage* [PA 1125] and *Kirsanov* [PA 1170] classes, now under construction) as well as other vessel types. Also, only those *Akyazi*-class PAs currently in service (or those scheduled to be commissioned before the end of 2290) are included in the listings. The home port for each PA group is listed in the second column. The data on actual PA assignments should be considered conjecture.

##### TacFleet Commander, Rear Admiral FLEET ONE NORTH

|                                 |                    |                                                                             |
|---------------------------------|--------------------|-----------------------------------------------------------------------------|
| Battle Force                    |                    |                                                                             |
| PA Group 6                      | Starbase 25        | <i>Akitsu</i> (PA 1012)<br><i>Buran</i> (PA 1027)<br><i>Akita</i> (PA 1038) |
| PA Group 21                     | Starbase 14        | <i>Brant</i> (PA 1033)<br><i>Artika</i> (PA 1060)                           |
| Patrol and Reconnaissance Force |                    |                                                                             |
| PA Group 10                     | Star Station Indus | <i>Eire</i> (PA 1041)                                                       |

##### TacFleet Commander, Rear Admiral FLEET ONE SOUTH

|                                 |                     |                                                                                                          |
|---------------------------------|---------------------|----------------------------------------------------------------------------------------------------------|
| Battle Force                    |                     |                                                                                                          |
| PA Group 5                      | Starbase 21         | <i>Biisk</i> (PA 1022)<br><i>Bril</i> (PA 1036)<br>* <i>Ancylus</i> (PA 1045)<br><i>Aversa</i> (PA 1070) |
| Patrol and Reconnaissance Force |                     |                                                                                                          |
| PA Group 33                     | Star Station Aurora | <i>Epirus</i> (PA 1015)<br><i>Tachira</i> (PA 1066)                                                      |

##### TacFleet Commander, Rear Admiral FLEET TWO NORTH

|                                 |                      |                                                                               |
|---------------------------------|----------------------|-------------------------------------------------------------------------------|
| Battle Force                    |                      |                                                                               |
| PA Group 31                     | Star Station Praeses | <i>Akyazi</i> (PA 1010)<br><i>Beuel</i> (PA 1026)<br><i>Armavir</i> (PA 1059) |
| PA Group 27                     | Starbase 16          | <i>Accipiter</i> (PA 1035)<br><i>Athy</i> (PA 1092)                           |
| Patrol and Reconnaissance Force |                      |                                                                               |
| PA Group 11                     | Starbase 29          | <i>Jico</i> (PA 1057)<br><i>Tioga</i> (PA 1063)                               |

##### TacFleet Commander, Vice Admiral FLEET TWO SOUTH

|                                 |                    |                                                                                                          |
|---------------------------------|--------------------|----------------------------------------------------------------------------------------------------------|
| Battle Force                    |                    |                                                                                                          |
| PA Group 24                     | Star Station Tiran | <i>Astura</i> (PA 1011)<br><i>Ephesus</i> (PA 1023)<br><i>Apia</i> (PA 1053)<br>* <i>Sjoto</i> (PA 1098) |
| PA Group 19                     | Starbase 12        | <i>Araxes</i> (PA 1030)<br><i>Ebro</i> (PA 1032)                                                         |
| PA Group 13                     | Starbase 11        | <i>Kitkun</i> (PA 1091)<br><i>Krka</i> (PA 1104)                                                         |
| Patrol and Reconnaissance Force |                    |                                                                                                          |
| PA Group 47                     | Star Station Tiran | <i>Jari</i> (PA 1058)<br>* <i>Archer</i> (PA 1069)                                                       |
| Tactical Transit Force          |                    |                                                                                                          |
| PA Group 50                     | Star Station Minsk | <i>Juist</i> (PA 1050)<br><i>Almdes</i> (PA 1067)                                                        |

##### TacFleet Commander, Rear Admiral FLEET THREE NORTH

|                                 |                      |                                                                                  |
|---------------------------------|----------------------|----------------------------------------------------------------------------------|
| Battle Force                    |                      |                                                                                  |
| PA Group 15                     | Star Station Cepheus | <i>Braga</i> (PA 1013)<br><i>Bisbee</i> (PA 1037)<br><i>Echo</i> (PA 1042)       |
| PA Group 18                     | Starbase 10          | <i>Acerra</i> (PA 1049)<br>* <i>Arvika</i> (PA 1093)<br><i>Sybaris</i> (PA 1102) |
| Patrol and Reconnaissance Force |                      |                                                                                  |
| PA Group 14                     | Starbase 26          | <i>Thun</i> (PA 1055)<br>* <i>Abitibi</i> (PA 1068)<br>* <i>Jativa</i> (PA 1071) |

**TacFleet**  
**Commander, Vice Admiral**  
**FLEET THREE SOUTH**

|                                 |                       |                                                                            |
|---------------------------------|-----------------------|----------------------------------------------------------------------------|
| Battle Force                    |                       |                                                                            |
| PA Group 44                     | Starbase 9            | <i>Alten</i> (PA 1019)<br><i>Eiger</i> (PA 1031)                           |
| PA Group 26                     | Outpost Neris         | <i>Atuga</i> (PA 1028)<br><i>Julin</i> (PA 1065)<br><i>Akula</i> (PA 1090) |
| PA Group 41                     | Star Station Yalta    | <i>*Kuril</i> (PA 1094)<br><i>Sandusky</i> (PA 1099)                       |
| PA Group 23                     | Starbase 19           | <i>Atago</i> (PA 1052)<br><i>Thrace</i> (PA 1064)                          |
| Patrol and Reconnaissance Force |                       |                                                                            |
| PA Group 12                     | Star Station Brasilia | <i>Bucke</i> (PA 1020)<br><i>Acri</i> (PA 1039)<br><i>Atessa</i> (PA 1056) |
| Tactical Transit Force          |                       |                                                                            |
| PA Group 25                     | Starbase 27           | <i>Ermont</i> (PA 1024)<br><i>*Amastra</i> (PA 1046)                       |
| PA Group 20                     | Star Station Yalta    | <i>Arbiter</i> (PA 1048)<br><i>Talence</i> (PA 1062)                       |

**TacFleet**  
**Commander, Rear Admiral**  
**FLEET FOUR NORTH**

|                                 |                     |                                                                                |
|---------------------------------|---------------------|--------------------------------------------------------------------------------|
| Battle Force                    |                     |                                                                                |
| PA Group 52                     | Starbase 7          | <i>Ameer</i> (PA 1014)<br><i>Acavus</i> (PA 1025)<br><i>Bendraze</i> (PA 1040) |
| PA Group 38                     | Outpost Principale  | <i>Bengal</i> (PA 1021)<br><i>*Accra</i> (PA 1047)                             |
| Patrol and Reconnaissance Force |                     |                                                                                |
| PA Group 29                     | Star Station Dallas | <i>Amagi</i> (PA 1016)<br><i>*Aparri</i> (PA 1077)                             |

**TacFleet**  
**Commander, Rear Admiral**  
**FLEET FOUR SOUTH**

|              |               |                                                                              |
|--------------|---------------|------------------------------------------------------------------------------|
| Battle Force |               |                                                                              |
| PA Group 17  | Starbase 15   | <i>Eleusis</i> (PA 1018)<br><i>Evian</i> (PA 1043)<br><i>Jelai</i> (PA 1061) |
| PA Group 28  | Outpost Ecija | <i>Saros</i> (PA 1096)<br><i>Kern</i> (PA 1100)                              |

Patrol and Reconnaissance Force

|             |                     |                                                   |
|-------------|---------------------|---------------------------------------------------|
| PA Group 45 | Star Station Eureka | <i>Avesta</i> (PA 1034)<br><i>Abila</i> (PA 1044) |
|-------------|---------------------|---------------------------------------------------|

Tactical Transit Force

|             |                     |                         |
|-------------|---------------------|-------------------------|
| PA Group 30 | Star Station Eureka | <i>Tensas</i> (PA 1054) |
|-------------|---------------------|-------------------------|

\*Scheduled to be commissioned before the end of 2290.



"Patience, Vigilance, Endurance"  
**Akyazi Class Insignia**

The official insignia of the *Akyazi* class consists of many elements. The bottom of the inner circle is dominated by a fiery starburst. This represents the many distant suns on the Frontier, the area of operation for ships of the *Akyazi* class. Likewise, the purple band in the upper portion of the circle represents the energy fluctuations located at certain points along the galactic rim. This is symbolic of the continuing desire to expand Federation space and move the perimeter ever outward.

At the center of the design are white, silver, and gold stylized vectors. These vectors symbolize the three sub-classes (*Akyazi*, *Arbiter*, and *Akula*) that comprise the *Akyazi* class. (Note that no vector is leading any other in its ascent, indicative of the importance of each sub-class design.) The vectors also honor the achievements and accomplishments of early Terran spaceflight programs, specifically the *Apollo* program of the later twentieth century. (The insignia for *Apollo 15* consisted of three vectors in orbital flight over Luna.) The colors are a reference to the three precious metals of that period—platinum (white), silver, and gold. They also represent purity, duty, and honor, or alternately, the class motto, "Patience, Vigilance, Endurance."

# Ship Classifications

Star Fleet ships and small craft are classified by type and by sequence within that type. The list of classifications (by approval of the Federation Commissioner of the Star Fleet) is issued periodically, updating a system that began in Earth-year 2208. Star Fleet's Class One list, considered definitive for Star Fleet Operating Forces at this moment, is indicated below.

The letter 'T' may be used as a suffix with any classification to denote a training vessel. Likewise, the letter 'X' is used unofficially as a suffix to indicate new or experimental designs or classes.

The following classifications are contained on the current list.

## Class One Vessels

### Cruisers

|     |                           |          |
|-----|---------------------------|----------|
| CH  | Heavy Cruiser             | Mk IX    |
| CS  | Strike Cruiser            | Mk XX    |
| CG  | Battlecruiser             | Mk XIII  |
| CD  | Through-Deck Cruiser      | Mk XV    |
| CKE | Large Exploratory Cruiser | Mk XXIII |
| CE  | Exploratory Cruiser       | Mk XXII  |
| CA  | Cruiser                   | Mk IV    |
| CL  | Light Cruiser             | Mk III   |

### Frigates

|    |               |          |
|----|---------------|----------|
| FH | Heavy Frigate | Mk XI    |
| FR | Frigate       | Mk V     |
| FF | Fast Frigate  | Mk XIX   |
| FS | Small Frigate | Mk XXVII |

### Destroyers

|    |                 |         |
|----|-----------------|---------|
| DH | Heavy Destroyer | Mk XII  |
| DD | Destroyer       | Mk VIII |

### Scouts

|    |            |          |
|----|------------|----------|
| SS | Superscout | Mk XVIII |
| ST | Scout      | Mk VII   |

### Patrol Combatants

|     |                             |         |
|-----|-----------------------------|---------|
| DN  | Dreadnought                 | Mk X    |
| CO  | Command Ship                | Mk XXI  |
| PKA | Large Perimeter Action Ship | Mk XXVI |
| PA  | Perimeter Action Ship       | Mk XXV  |
| CV  | Corvette                    | Mk XIV  |
| CP  | Clipper                     | Mk II   |
| CR  | Corsair                     | Mk I    |

### Specialized

|    |                    |         |
|----|--------------------|---------|
| SC | Shuttlecarrier     | Mk XVI  |
| SO | Space Control Ship | Mk XVII |

## Class One Auxiliaries

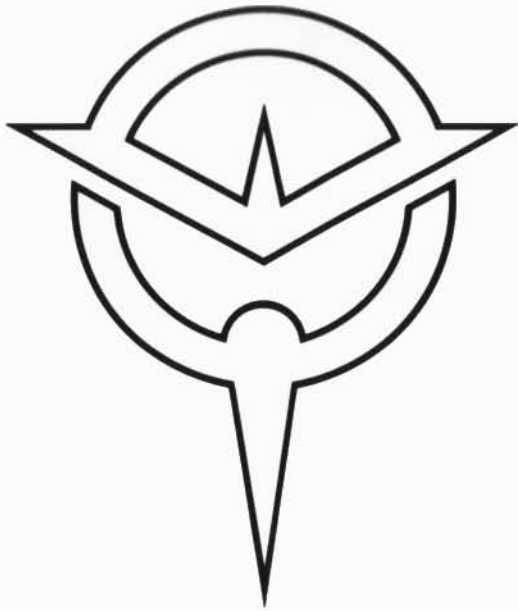
### Support Ships

|    |                     |           |
|----|---------------------|-----------|
| TR | Transport           | Mk XXIX   |
| TT | Transport/Tug       | Mk VI     |
| TE | Tender              | Mk XXX    |
| SP | Combat Support Ship | Mk XXIV   |
| ET | Escort              | Mk XXVIII |

# Glossary

|                 |                                                                                                                                                                            |           |                                                                                                                                                                                                                                                    |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADI             | a Tellarite acronym for a series of Bzevhistakis-built long-range sensor packages                                                                                          | Mk        | Mark                                                                                                                                                                                                                                               |
| ARU/SI          | Active Response Unit/Selective Integrity                                                                                                                                   | Mod       | Model                                                                                                                                                                                                                                              |
| ASL             | an engineering design acronym for a Scarbak emergency impulse drive system, currently installed in <i>Arbiter</i> and <i>Akula</i> group perimeter action ships (see FORS) | MSC       | Military Staff Committee                                                                                                                                                                                                                           |
| CCE             | an Andorian acronym for an Orage Ijek impulse engine configuration, currently installed in <i>Akyazi</i> group perimeter action ships (see CME)                            | NAVCAS    | Navigational Control And Sequencing                                                                                                                                                                                                                |
| CIDSS           | Close-In Deflector Shield System                                                                                                                                           | NCC       | Naval Construction Contract and/or Navigational Contact Code number                                                                                                                                                                                |
| CME             | an Andorian acronym for an Orage Ijek impulse engine configuration, currently installed in <i>Arbiter</i> and <i>Akula</i> group perimeter action ships (see CCE)          | Nem Ankh  | from the Terran Old Egyptian, "Eternal Life"                                                                                                                                                                                                       |
| DCA/DSA         | Defense Cloaking Active/Defense Stasis Active countermeasure system                                                                                                        | NPC       | Navigational Processing Center                                                                                                                                                                                                                     |
| FORS            | an engineering design acronym for a Scarbak emergency impulse drive system, currently installed in <i>Akyazi</i> group perimeter action ships (see ASL)                    | PAPE      | Perimeter Action Platform Experimental; a perimeter action ship development program funded by Star Fleet, active from May 2272 to March 2273                                                                                                       |
| Hung<br>nawlogh | Klingonese language variant, roughly translated as "security squadron"                                                                                                     | PIs       | places                                                                                                                                                                                                                                             |
| IPP-1           | Internal Perimeter Program One; a long-term research and development program conducted independently by Temerand Duplicat in the early 2280s                               | P/S       | port and starboard                                                                                                                                                                                                                                 |
| ISC             | Independently Sequenced Control                                                                                                                                            | PSA       | Post-Shakedown Availability; refers to a vessel's return to the builder after approximately 6-10 months for systems and performance evaluation                                                                                                     |
| JAKA            | an engineering design acronym for an Asakaze Ordnance phaser system                                                                                                        | QASR      | an Alpha Centaurian acronym for a Scarbak particle beam maneuvering thruster system                                                                                                                                                                |
| KM              | kilometer                                                                                                                                                                  | QEV       | Quadrillion Electron Volt                                                                                                                                                                                                                          |
| LIEN            | Logistical Intercept Encoding Net                                                                                                                                          | RAV/ISHAK | a Coridianian acronym for a Tlixis Ramab Warp Celestial Guidance system (see RAV/TENEC)                                                                                                                                                            |
| LN              | Manufacturers' standard prefix for linear warp engine model numbers                                                                                                        | RAV/TENEC | a Coridianian acronym for a Tlixis Ramab Warp Celestial Guidance system, currently being installed in <i>Arbiter</i> group perimeter action ships (see RAV/ISHAK)                                                                                  |
| MCH1            | an engineering design acronym for a Cristobal gravity and atmosphere maintenance unit                                                                                      | RCS       | Reaction Control System                                                                                                                                                                                                                            |
| MCM             | Motion Control Monitor                                                                                                                                                     | SFD       | Star Fleet Division shipbuilding subsidiary                                                                                                                                                                                                        |
| MD              | Multi-Directional, as in the Scarbak FORS MD emergency impulse drive system                                                                                                | STRATAC   | Strategic and Tactical; sensor net functions independently; also operates in conjunction with holocom room (located immediately above on deck 5) to interpret and decipher incoming signals from dispatched intelligence and reconnaissance drones |
| MDS             | a Tellarite acronym for a Kal Achal deflector pod system in the "Bia" series                                                                                               | TAVITAC   | a Keindoffer-Klaatsen tactical subsystem, named for its primary designer, Alexander Tavin                                                                                                                                                          |





# AKYAZI

## Group Perimeter Action Ships

The *Akyazi*-class perimeter action ships (including the *Arbiter* and *Akula* sub-classes) are the largest group of Class One starships to be constructed since the *Ariadne* (CP 206)-class clippers were ordered in 2276 (127 vessels). These ships combine various aspects of scouts (speed), destroyers (weapons capacity), and intelligence platforms (sensing, listening, and jamming apparatus) into a single package, making them formidable perimeter defense units.

The *Akyazi* group is the “baseline” design for the *Akyazi* class. The ships’ stealth characteristics and design “flexibility” resulted in performance parameters being met or exceeded in every category during acceptance trials. Their developmental history is noted below.

**Class:** The *Akyazi* class has a long and storied history in Star Fleet program proposals. The class name dates back to 2269 when 178 ships were proposed in the PA 1010 series; the current design, however, bears little resemblance to its aborted predecessors.

**February 2269/Stardate 7629.4 -**

Responding to an increase in the number of borderspace violations by various threat forces, Procurements Committee recommends Star Fleet Program Proposal No. 34714S - construction of 178 perimeter action platforms in the PA 1010 series and a minimum of four additional strike cruisers of the CS 2500 design.

**July 2269 -**

Orders for long-lead components for the *Decatur* (CS 2500) Class are placed with subcontractors; PA 1010 class, now dubbed *Akyazi*, enters Category II design phase.

**January 2270 -**

Star Fleet Requirements Analysis Board issues list of design parameters for the *Akyazi* class. Category III design phase begins and five firms prepare design proposals:

Arias Mastac, Carina, Cosmadyne, Star Fleet Division-Baltic, and Temerand Duplicat.

A Federation Council subcommittee, assembled by Councillor Eso Procuia, questions the need for 178 ships of the perimeter action type and begins an independent investigation.

**August 2270 -**

TacFleet and Bureau of Spacecraft officials conduct simulation studies on project test articles submitted by the competing firms. The Carina design is the front-runner, benefiting from a low profile and stealth features.

**November 2270 -**

Councillor Procuia’s subcommittee issues its controversial report of findings and, with engineering testimony and data from the publication *Merrel’s Fleet Review* adding weight to the “bigger is better” argument, the *Akyazi* program is not only reduced but put on temporary hold altogether.

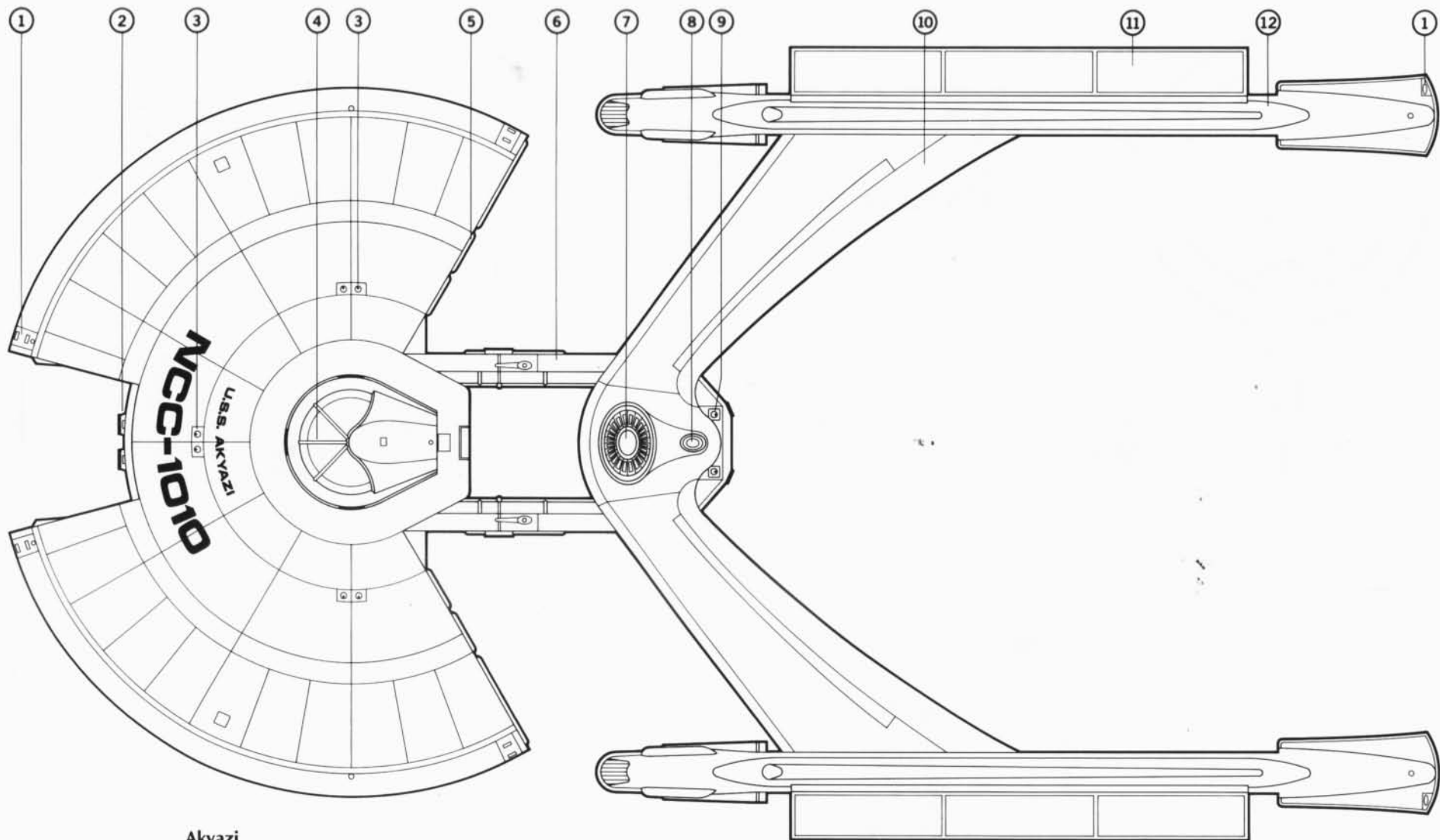
The Military Staff Committee orders an additional 15 strike cruisers of the *Decatur* design (CS 2501-14, 2519) on 11 November, bringing the total number to 20.

**21 October 2271 -**

Construction begins on the second ship in the *Decatur* class, U.S.S. *Belknap* (CS 2501), at Cosmadyne’s Boston Division shipyards. Numerous improvements are to be incorporated into the design (4½ Earth-years have passed since the commissioning of the lead vessel) and the ships will eventually be redesignated *Belknap* class.

**May 2272 -**

Star Fleet successfully lobbies for funding of the PAPE (Perimeter Action Platform Experimental) long-term development program on the basis of needing an eventual follow-on to the large numbers of aging and outdated *Kiaga* (PA 826)- and *Agilis*



### Akyazi

1. Kenelex reaction control system 2. Mk 5 Komati torpedo tubes 3. JAKA-2 phaser banks 4. bridge deflector shield enhancement 5. sensor pallets 6. propulsion section support pylons 7. impulse amplification crystal (primary) 8. impulse amplification crystal (secondary) 9. JAKA-5 phaser banks 10. warp engine support pylons 11. warp field reflector 12. LN-90 Mod 1 warp drive units

(PA 855)-class perimeter action ships. Avondale and Temerand Duplicat begin design programs.

7 August 2272 -

Kzin vessels attack Tau Ceti and begin a six-week offensive action against Federation forces. Star Fleet response is swift, but 11 Class One starships and dozens of Kzin vessels are lost. Kzinti forces are finally defeated at Zetar in September.

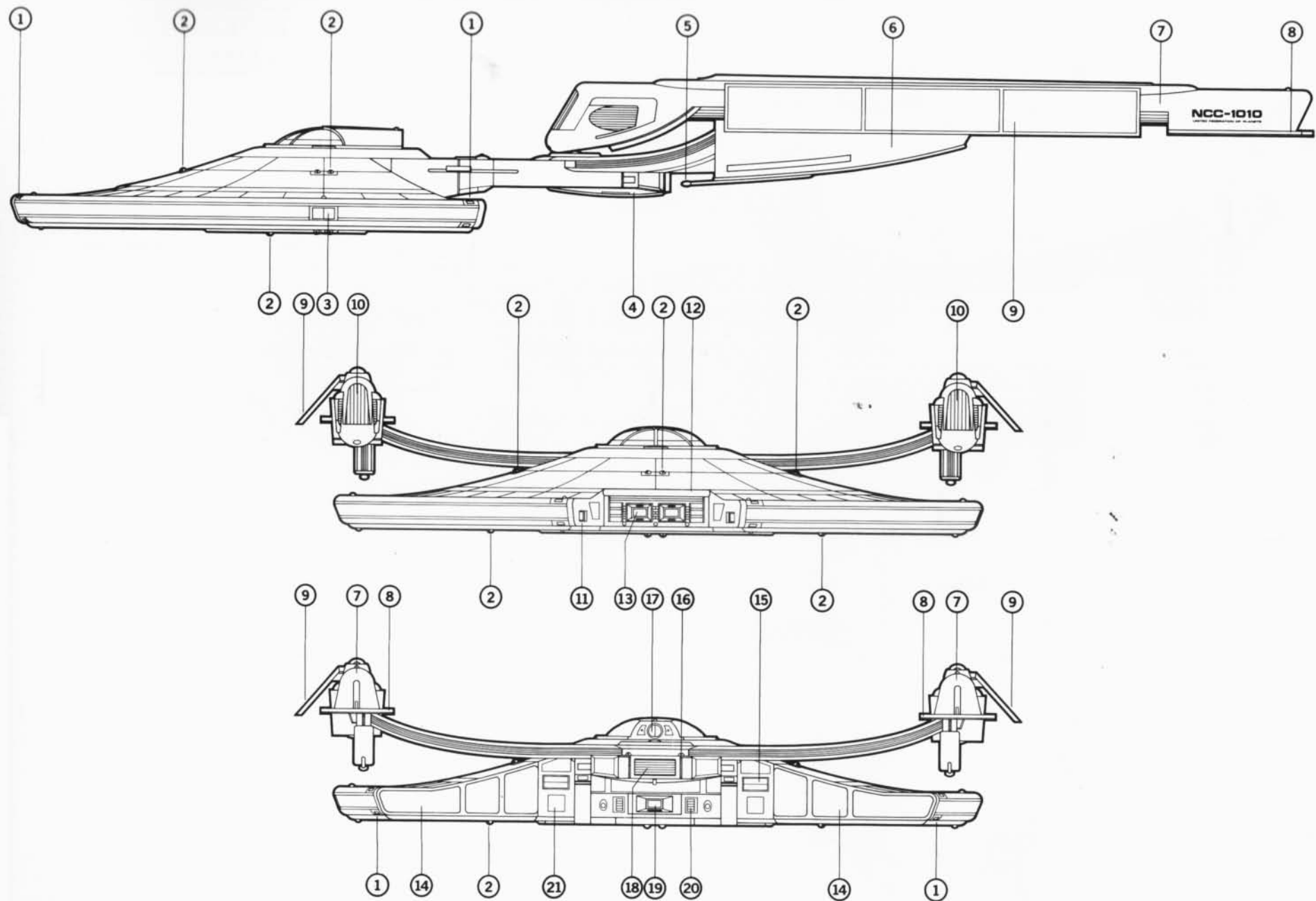
March 2273 -

Preliminary Evaluation tests are conducted on the 1/3-scale prototypes constructed

by Avondale and Temerand. The designs are radically different and neither meets the performance parameters for flight compatibility set down by the Star Fleet Requirements Board. The PAPE program is terminated.

December 2273 -

The Cammell IV revelations concerning Star Fleet's covert operations against the Kzin prior to the Kzinti Incursion result in massive cutbacks in Fleet programs. The Federation Council temporarily freezes all Class One starship construction; the Akyazi program is put on indefinite hold (where it will remain for nearly ten Earth-years).



# **Akyazi**

1. Kenelex reaction control system 2. JAKA-2 phaser banks 3. gangway hatch 4. engineering pod 5. deflector spires 6. deflector spire dissipation assembly 7. LN-90 Mod 1 warp drive units 8. intercooler assembly 9. warp field reflector 10. acquisition vanes 11. QASR maneuvering thrusters 12. Ochu deflector array 13. Mk 5 Komati torpedo tubes 14. sensor pallets 15. workbee stowage 16. JAKA-5 phaser banks 17. bridge docking port 18. CCE impulse engine 19. Mk 9 Boris torpedo tube 20. photon exhaust vanes 21. lifeboat emplacement

### 33 + 3 PERIMETER ACTION SHIPS: "AKYAZI" CLASS

| Number   | Name      | Builder                                                            | Laid Down    | Launched     | Commissioned | Status   |
|----------|-----------|--------------------------------------------------------------------|--------------|--------------|--------------|----------|
| NCC-1010 | Akyazi    | Arbing & Lidde Starship Construction, Boston, Earth                | 16 June 2284 | 20 Dec 2285  | 11 Oct 2286  | ATAC     |
| NCC-1011 | Astura    | Carina Design & Construction, Tanami Spacebridge, Australia, Earth | 05 Sept 2284 | 19 Feb 2286  | 22 Nov 2286  | ATAC     |
| NCC-1012 | Akitsu    | Arbing & Lidde Starship Construction, Boston, Earth                | 29 July 2284 | 04 Jan 2286  | 17 Oct 2286  | ATAC     |
| NCC-1013 | Braga     | Star Fleet Division, Alfras Naval Yards, Deneb V                   | SD 8520.10   | SD 8559.23   | SD 8571.15   | ATAC     |
| NCC-1014 | Ameer     | Carina Design & Construction, Tanami Spacebridge, Australia, Earth | 11 May 2285  | 21 July 2286 | 08 Jan 2287  | ATAC     |
| NCC-1015 | Epirus    | Rapier Dynamics Group, Melbourne Division, Earth                   | 14 Aug 2284  | 28 Jan 2286  | 03 Nov 2286  | ATAC     |
| NCC-1016 | Amagi     | Star Fleet Division, Alfras Naval Yards, Deneb V                   | SD 8611.05   | SD 8653.19   | SD 8667.21   | ATAC     |
| NCC-1017 | Abreus    | Newport News Shipbuilding, Louisiana, Earth                        | 09 July 2284 | 15 Dec 2285  | 16 Sept 2286 | Lost     |
| NCC-1018 | Eleusis   | Star Fleet Division, Baltic Yards, Leningrad, Earth                | 24 Nov 2284  | 15 Jan 2286  | 28 Sept 2286 | ATAC     |
| NCC-1019 | Alten     | Avondale Group, New Dallas, Rigel IV                               | SD 7971.21   | SD 7999.21   | SD 8010.45   | ATAC     |
| NCC-1020 | Bucke     | Newport News Shipbuilding, Louisiana, Earth                        | 28 June 2284 | 11 Dec 2285  | 30 Aug 2286  | ATAC     |
| NCC-1021 | Bengal    | Arbing & Lidde Starship Construction, Boston, Earth                | 30 Dec 2285  | 07 Apr 2287  | 03 Nov 2287  | ATAC     |
| NCC-1022 | Biisk     | Carina Design & Construction, Tanami Spacebridge, Australia, Earth | 24 Aug 2285  | 29 Oct 2286  | 12 May 2287  | ATAC     |
| NCC-1023 | Ephesus   | Avondale Group, New Dallas, Rigel IV                               | SD 7993.61   | SD 8022.94   | SD 8040.63   | ATAC     |
| NCC-1024 | Ermont    | Rapier Dynamics Group, Melbourne Division, Earth                   | 27 Nov 2284  | 20 Mar 2286  | 05 Dec 2286  | ATAC     |
| NCC-1025 | Acavus    | Star Fleet Division, Baltic Yards, Leningrad, Earth                | 19 Nov 2284  | 16 Feb 2286  | 27 Aug 2286  | ATAC     |
| NCC-1026 | Beuel     | Arbing & Lidde Starship Construction, Boston, Earth                | 13 Jan 2286  | 29 Apr 2287  | 25 Oct 2287  | ATAC     |
| NCC-1027 | Buran     | Avondale Group, New Dallas, Rigel IV                               | SD 8035.84   | SD 8074.27   | SD 8091.10   | ATAC     |
| NCC-1028 | Atuga     | Star Fleet Division, Alfras Naval Yards, Deneb V                   | SD 8654.18   | SD 8687.73   | SD 8699.44   | ATAC     |
| NCC-1029 | Arauca    | Newport News Shipbuilding, Louisiana, Earth                        | 29 Nov 2285  | 08 Feb 2287  | 12 Aug 2287  | Lost     |
| NCC-1030 | Araxes    | Carina Design & Construction, Tanami Spacebridge, Australia, Earth | 15 Dec 2285  | 25 Mar 2287  | 27 Aug 2287  | ATAC     |
| NCC-1031 | Eiger     | Star Fleet Division, Alfras Naval Yards, Deneb V                   | SD 8681.15   | SD 8715.42   | SD 8729.32   | ATAC     |
| NCC-1032 | Ebro      | Star Fleet Division, Baltic Yards, Leningrad, Earth                | 29 Oct 2285  | 06 Dec 2286  | 02 May 2287  | ATAC     |
| NCC-1033 | Brant     | Arbing & Lidde Starship Construction, Boston, Earth                | 17 Nov 2286  | 03 Jan 2288  | 19 June 2288 | ATAC     |
| NCC-1034 | Avesta    | Arbing & Lidde Starship Construction, Boston, Earth                | 26 Oct 2286  | 30 Dec 2287  | 03 June 2288 | ATAC     |
| NCC-1035 | Accipiter | Rapier Dynamics Group, Melbourne Division, Earth                   | 15 Jan 2285  | 03 May 2286  | 29 Nov 2286  | ATAC     |
| NCC-1036 | Bril      | Avondale Group, New Dallas, Rigel IV                               | SD 8071.06   | SD 8109.33   | SD 8127.93   | ATAC     |
| NCC-1037 | Bisbee    | Newport News Shipbuilding, Louisiana, Earth                        | 15 Oct 2286  | 06 Jan 2288  | 30 June 2288 | ATAC     |
| NCC-1038 | Akita     | Rapier Dynamics Group, Melbourne Division, Earth                   | 20 Nov 2285  | 21 Jan 2287  | 11 July 2287 | ATAC     |
| NCC-1039 | Acri      | Newport News Shipbuilding, Louisiana, Earth                        | 12 Jan 2287  | 26 Feb 2288  | 07 July 2288 | ATAC     |
| NCC-1040 | Bendraze  | Star Fleet Division, Baltic Yards, Leningrad, Earth                | 17 July 2286 | 05 Sept 2287 | 25 Feb 2288  | ATAC     |
| NCC-1041 | Eire      | Carina Design & Construction, Tanami Spacebridge, Australia, Earth | 27 Jan 2287  | 04 Mar 2288  | 15 Aug 2288  | ATAC     |
| NCC-1042 | Echo      | Carina Design & Construction, Tanami Spacebridge, Australia, Earth | 23 May 2287  | 02 Aug 2288  | 24 Apr 2289  | ATAC     |
| NCC-1043 | Evian     | Arbing & Lidde Starship Construction, Boston, Earth                | 14 Feb 2288  | 23 May 2289  | 02 Nov 2289  | ATAC     |
| NCC-1044 | Abila     | Arbing & Lidde Starship Construction, Boston, Earth                | 05 Apr 2288  | 17 June 2289 | 03 Dec 2289  | ATAC     |
| NCC-1045 | Ancylus   | Arbing & Lidde Starship Construction, Boston, Earth                | 21 June 2288 | 29 Sept 2289 |              | Building |
| NCC-1046 | Amastra   | Arbing & Lidde Starship Construction, Boston, Earth                | 25 Sept 2288 | 15 Dec 2289  |              | Building |
| NCC-1047 | Accra     | Newport News Shipbuilding, Louisiana, Earth                        | 13 Mar 2288  | 11 July 2289 |              | Building |

July 2276-February 2277 -

Recently seated Councillor Arman Thel introduces several plebiscites aimed at re-instituting debate on the validity of a new perimeter action program. Despite promised support from various Council members, the issue is not tabled during any of seven Council sessions.

April 2280 -

Temerand Duplicat funds an internal company design program quietly dubbed IPP-1 (Internal Perimeter Program One). The company's Martian facility begins conducting independent research and development in an effort to produce several PA designs that would be acceptable to Star Fleet should the perimeter action program be reinstated.

30 May 2283 -

The Taal Tan Offensive by Klingon forces shakes the Federation Council; the pacifist bloc falls out of favor. The appointment of Lars-Erik Valdemar as Federation Commissioner on 08 June signifies Council support for a program of Fleet rejuvenation.

July 2283 -

A new Temerand Duplicat design is chosen as the basis for the reinstated Akyazi perimeter action program. The testing phase is accelerated due to the ongoing Taal Tan Offensive and simulation studies reveal few major problems with the basic design.

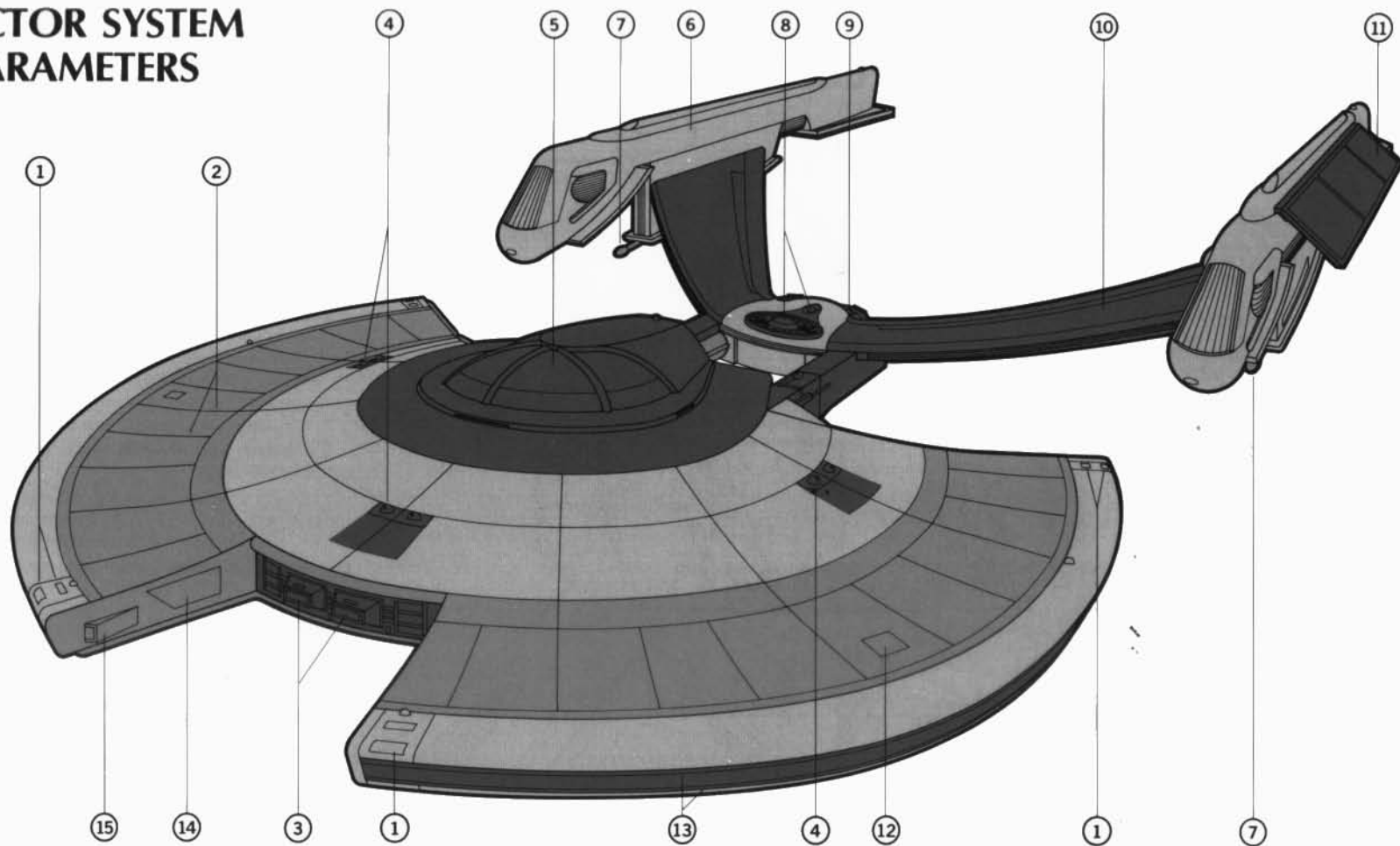
August 2283 -

The Military Staff Committee authorizes 105 Akyazi (PA 1010)-class perimeter action ships (reduced from the 178 vessels of 2269 proposals) on 02 August. Thirty-eight



# MERLIN II DEFLECTOR SYSTEM OPERATIONAL PARAMETERS

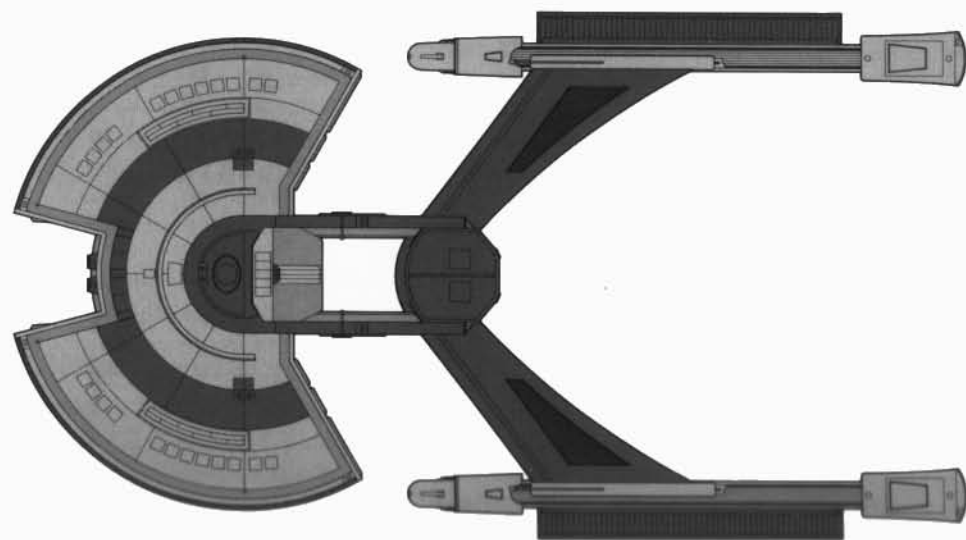
**AKYAZI GROUP**  
Class One - Mk XXV  
**PORT PERSPECTIVE**  
**BOTTOM PLAN**

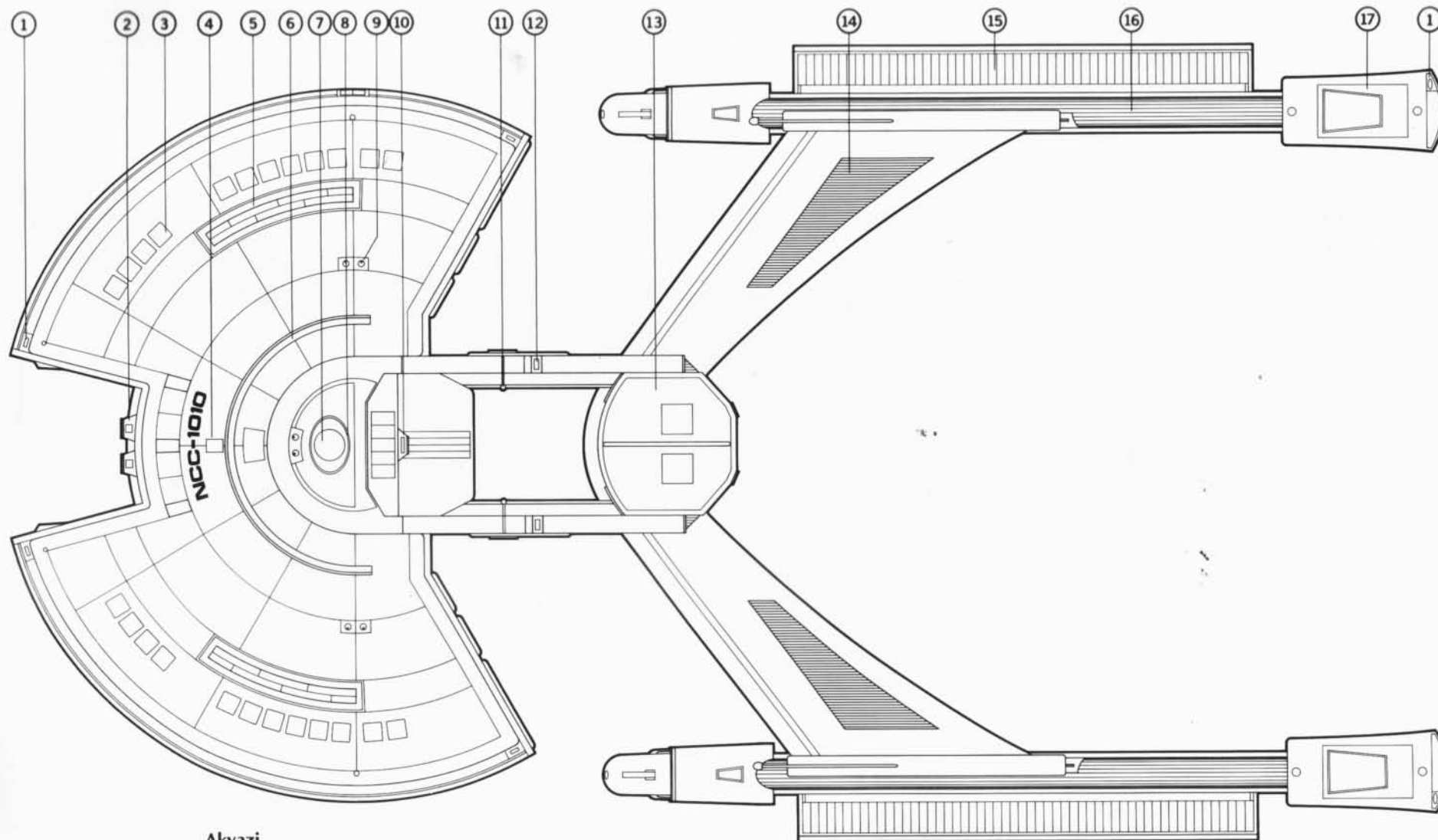


**RELATIVE FIELD STRENGTH AT  
STANDARD COMBAT PROTOCOL -**  
Percentage of Assigned Generator Output

|  |               |
|--|---------------|
|  | PRIMARY 59%   |
|  | SECONDARY 23% |
|  | TERTIARY 18%  |

1. Kenelex reaction control system 2. defensive systems grid 3. Mk 5 Komati torpedo tubes 4. JAKA-2 phaser banks 5. bridge 6. LN-90 Mod 1 warp drive units 7. deflector spire 8. impulse amplification crystals 9. JAKA-5 phaser banks 10. warp engine support pylons 11. Kreddick warp field reflector 12. personnel hatch 13. lateral defensive systems grid 14. photon torpedo flash-shields 15. QASR maneuvering thrusters





### Akyazi

1. Kenelex reaction control system 2. MK 5 Komati torpedo tubes 3. lifeboat emplacements 4. emergency eject (weapons crew)  
 5. FORS emergency impulse engines 6. Shim sensor assembly 7. McCook primary sensor array 8. tractor beam ring 9. JAKA-2  
 phaser banks 10. Mk 9 Boris torpedo tube 11. explosive bolt separation 12. QASR maneuvering thrusters 13. engineering  
 pod 14. emergency flush vents 15. warp field reflector 16. warp field generator assembly 17. intercooler assembly

ships are officially ordered on 17 August; seven construction firms will be contracted.

The MSC and senior TacFleet policymakers issue strict guidelines to the contractors regarding PA mission doctrine and systems compatibility requirements. Among several mandates are the following: "[Akyazi] perimeter action vessels will be the primary focus in Star Fleet's strategic objective of moving from a posture of spherical defense to one of point defense as quickly as possible under anticipated threat force scenarios. As such, all ship systems (communication, propulsion, etc.) will be dedicated to achieving a point defense situation so as to bring defensive weapons to bear with all possible haste."

January 2284 -

Prototype test article evaluations continue on shell prototypes No. 2 and 3 at Temerand. Some changes include: improvement of recognition profile and stealth characteristics by elimination of a sixth deck in the main hull; incorporation of the "Fier" LN-90 warp units into the design, replacing the larger LN-83 system; creation of a "double boom" structure to separate engineering functions from the main hull, resulting in greater warp maneuverability and enhanced safety characteristics.

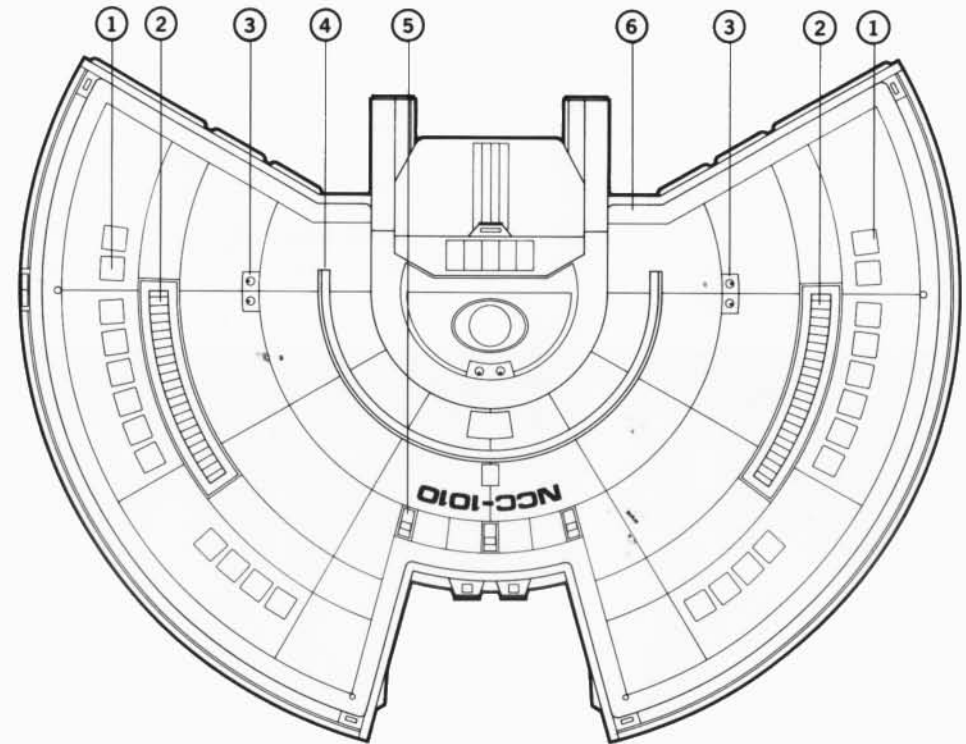
Prototype No. 1 is loaned to TacFleet for security evaluations.

# Current specifications of Akyazi sub class:

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Displacement:</b>     | 68,000 metric tons standard<br>(66,800mt light, 69,000mt full load)<br>NCC-1043-46: 67,000 metric tons standard<br>(66,200mt light, 68,000mt full load)                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Length:</b>           | Overall 216.1m<br>Primary Hull 78.9m<br>Nacelles 126.7m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Beam:</b>             | 120.2m<br>107.6m<br>16.2m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Draft:</b>            | 27.5m<br>18.2m<br>13.1m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Propulsion:</b>       | Two (2) "Fier" LN-90 Mod 1 dilithium-energized antimatter linear warp drive units<br>(System contractor: Vickers Engineering Group Ltd., Cumbria, Earth)<br>One (1) "Delum" CCE subatomic unified energy impulse unit<br>(System contractor: Orage Ijek, Aksajak, Andor)<br>Two (2) FORS MD emergency impulse thrust units<br>QASR enhanced particle beam maneuvering thrusters<br>(Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)<br>"Kenelex" pulsed laser reaction control system<br>(System contractor: Orage Ijek, Aksajak, Andor) |
| <b>Velocity:</b>         | Warp 8, standard<br>Warp 14, maximum<br>Warp 21.5, battle maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Acceleration:</b>     | Rest-Onset Critical Momentum: 2.05 sec<br>Onset Critical Momentum-Warp Engage: .68 sec<br>Warp 1-Warp 4: .19 sec<br>Warp 4-Warp 8: .11 sec<br>Warp 8-Warp 14: 1.28 sec<br>Warp 14-Warp 21.5: 2.01 sec                                                                                                                                                                                                                                                                                                                                                  |
| <b>Duration:</b>         | 2 Earth years, standard<br>3.25 Earth years, maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Complement:</b>       | 84 (8 officers + 76 crew)<br>NCC-1033, 1034, 1037, 1039-46: 80 (8 officers + 72 crew)                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Embarked craft:</b>   | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Navigation:</b>       | NAVCAS Select, Warp Celestial Guidance<br>(System contractor: Prinzhenri S.N., Rio de Janeiro, Earth)                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Computers:</b>        | "Ilorin" Duotronic IV<br>(System contractor: Kuchata Pratus Ikyla, Arrasta, Daran V)<br>NCC-1013, 1016, 1018, 1025, 1028, 1031, 1032, 1040: Datatac Support Subsystem<br>(System contractor: Farranti Mnemonics, Berkshire, Earth)                                                                                                                                                                                                                                                                                                                     |
| <b>Phasers:</b>          | 6 banks of 2 each - JAKA-2 independent twin mount<br>2 banks - JAKA-5 single mount<br>NCC-1013, 1016, 1018, 1025, 1028, 1031, 1032, 1040: 6 banks of 2 each - JAKA-2 independent twin mount<br>(Systems contractor: Asakaze Ordnance Systems Ltd., Honshu-Hamamatsu, Earth)                                                                                                                                                                                                                                                                            |
| <b>Photon torpedoes:</b> | 2 tubes - Mk 5 "Komati" independent<br>1 tube - Mk 9 "Boris" independent<br>(Systems contractor: Arvan Toy Conglessum, Binz, Tellar)                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Defense:</b>          | "Merlin II" primary force field and deflector control system<br>NCC-1021, 1026, 1033, 1034, 1043-46: CIDSS (heavy) Deflector Supplement<br>"Orissa" cloaking generation and stasis countermeasure system<br>(Systems contractor: Prentice-Schafer Inc., Marsport, Mars)<br>"Nike" weapon system (enhanced)<br>TAVITAC Tactical Subsystem<br>(Systems contractor: Keindoffer-Klaatsen DSC, Munich, Earth)                                                                                                                                               |

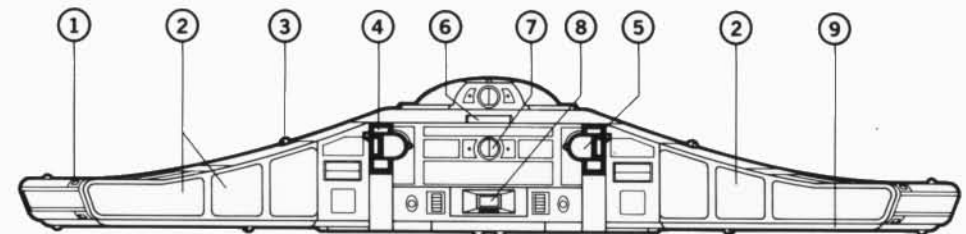
## Life support:

"Saco Onorvoz" deflector spires  
(System contractor: Kal Achal Conglessum, Takuv, Tellar)  
MCH1 Modular Gravity and Atmosphere Maintenance Unit  
"Brida" radiation protection package  
(Systems contractor: Cristobal SM/S, Manila, Earth)  
"Lenix" waste regeneration systems  
(System contractor: Jullundur-Lahore Ltd., Bombay, Earth)



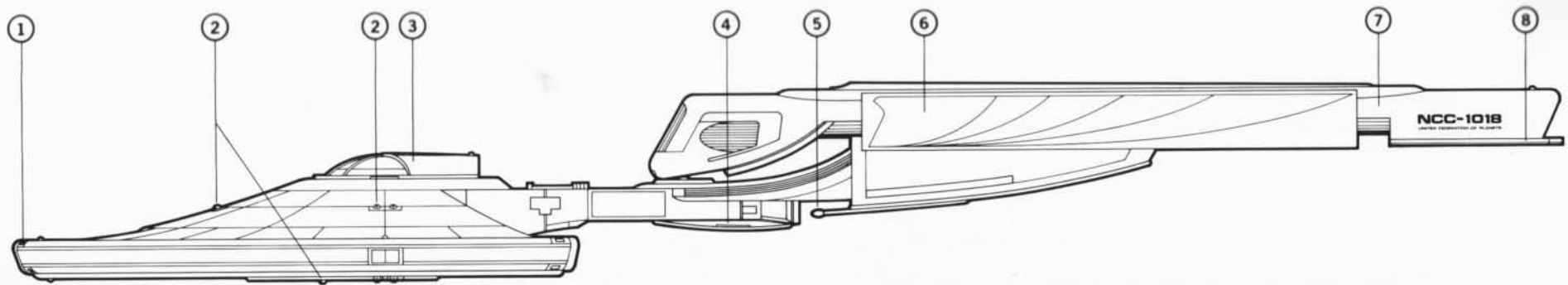
**Akyazi** (emergency flight posture)

1. lifeboat emplacements 2. FORS emergency impulse engines (minus covers) 3. JAKA-2 phaser banks 4. Shim sensor assembly 5. additional QASR maneuvering thrusters (minus covers) 6. sensor platform



**Akyazi** (cross-section at pylon bolt, frame 224)

1. Kenelex reaction control system 2. sensor pallets 3. JAKA-2 phaser banks 4. structural bulkheads 5. pylon transfer tube 6. lounge viewport 7. Deck 3 docking port 8. Mk 9 Boris torpedo tube 9. sensor platform



### Eleusis

1. Kenelex reaction control system 2. JAKA-2 phaser banks 3. bridge 4. engineering pod 5. deflector spires 6. warp field reflector 7. LN-90 Mod 1 warp drive units 8. intercooler assembly

### Akyazi Class Performance Characteristics: Planned vs. Realized

The basic Akyazi starship design (i.e. those design aspects common to all three sub-classes) is based on 100% power expenditure to achieve stated mission parameters. This design philosophy is a result of Star Fleet's present approach to strategic perimeter defense requirements. Consequently, the Akyazi (and Arbiter)-class perimeter action ships can achieve higher speeds (for shorter periods of time) than any other Class One starships.

During pre-construction simulation studies it was estimated that the basic Akyazi design, under ideal conditions, would be capable of achieving a maximum velocity of warp 12.5-13, and a battle maximum (i.e. limited duration) velocity of approximately warp 19.25-19.75. However, early deployments soon proved these estimates too conservative. On separate occasions, starships Akyazi (PA 1010), Amagi (PA 1016), Alten (PA 1019), Bengal (PA 1021), and Ermont (PA 1024) all surpassed design velocity limits without exceeding specified safety parameters. (On stardate 8827.3, the Amagi achieved warp 23.97 for nearly one minute while in pursuit of Kel family Orion fast attack craft.) Additionally, the PSA schedules of the first ten ships launched (PA 1010-13, 1015-20) revealed fewer initial operational deficiencies than expected.

The lack of excess mass at the centerpoint of the Akyazi design (i.e. the "double boom" configuration) resulted in greater "warp flexibility" than anticipated and contributed to the surpassing of various other parameters including acceleration times (estimates exceeded by 11%), post-warp braking (4%), and stress tolerance factors at critical hull points (increasing projected service life by approximately 8-12 Earth-years).

The PSA schedules of those ships involved in combat actions revealed less fatigue in ships weapon systems (particularly the phaser turret assemblies) than had been anticipated. There had been some concern among the designers of the phaser system that its high output capacity (greater than any other Class One starship, albeit in short "bursts") might overload the damping and cancelling ability of the Kyturonium-lined turrets. However, extensive testing of in-port vessels revealed deterioration well within established norms.

March 2284 - ☾ •

All major design features are finalized and approved by the Requirements Board. The first production ship, the Akyazi, will be built by Arbing & Lidde beginning in June. Temerand is informed it will not receive a slot in the construction schedule for the initial order of 38 ships.

Eleven members of a support crew are killed when a temporary bulkhead baffle ruptures on Prototype No. 2 during post-warp stress analysis tests.

16 June 2284 -

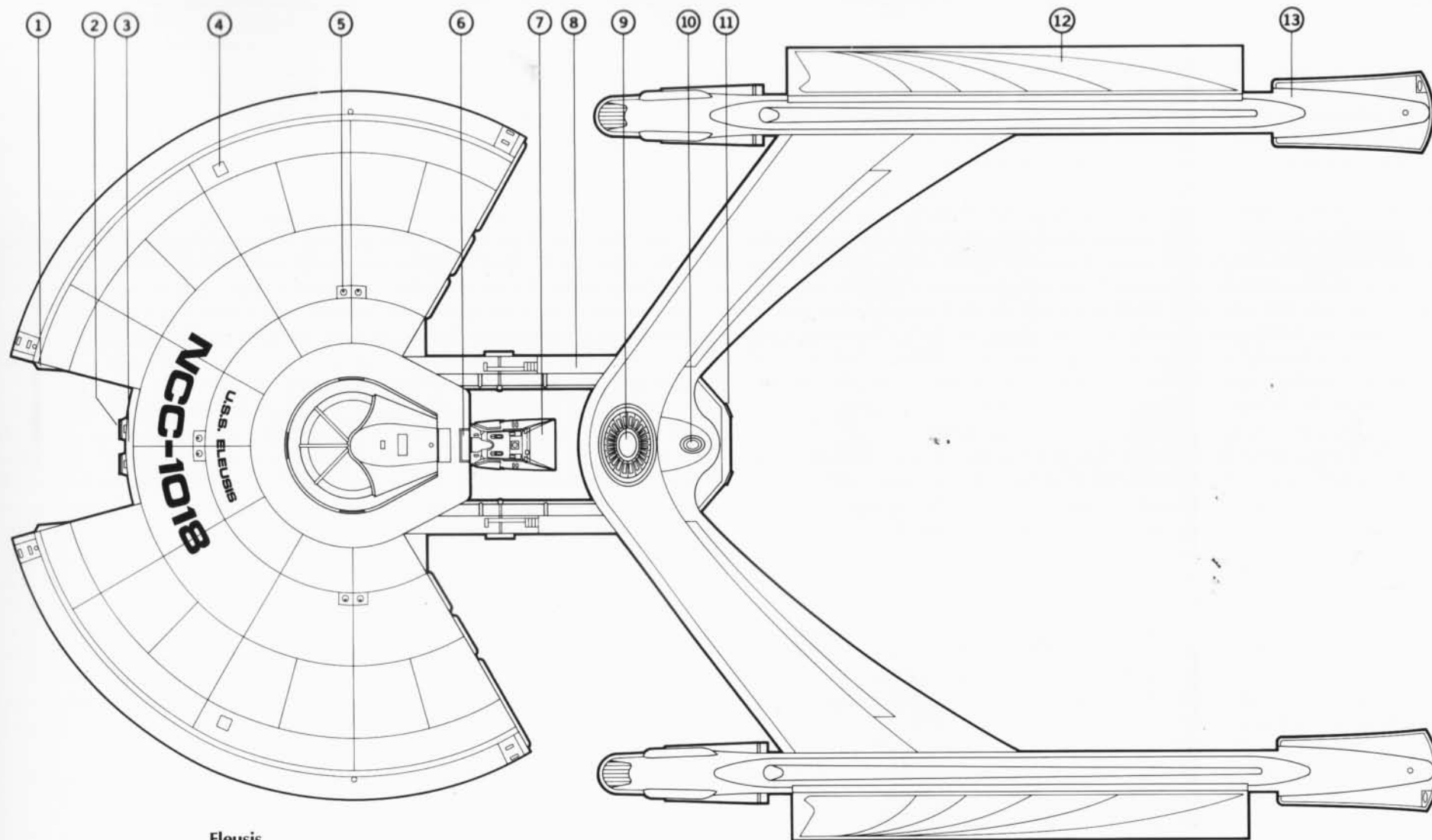
Work begins on the Akyazi (PA 1010) at Arbing & Lidde Starship Construction, Boston, Earth.

**Classification:** The Akyazi class was ordered under a perimeter action ship (PA) classification in August 2283; the Akyazi sub-class was officially ordered as PA 1010 through PA 1047.

**Design:** Virtually all of the evaluation studies and "final fit" systems testing for this sub-class was performed on the Akyazi (the Temerand-built test articles were configured to somewhat different warp geometries and utilized numerous different sub-systems). The Bucke (PA 1020) was the first ship of the class to be launched and participated in warp field propagation tests before and immediately after her commissioning.

The later Arbing & Lidde ships (PA 1043-46) have lower displacement figures due to the elimination of redundant reinforcement features within the "twin boom" support pylons.

All ships of the Akyazi sub-class possess multiple stealth characteristics, foremost among these the "Orissa" cloaking generation system. However, it should also be noted that from the outset the design team was instructed to create a hull form that was both psychologically challenging to potential humanoid adversaries as well as superior in its ability to deceive enemy sensing and scanning systems. This was partially achieved by the incorporation of a "low recognition profile" in the Akyazi (and Arbiter) sub-classes, i.e. the ships have a very low draft (approximately 28 meters). Further, while scanning any ship at warp speed can be difficult, scanning an Akyazi



### Eleusis

1. QASR maneuvering thrusters 2. Mk 5 Komati torpedo tubes 3. Ochu deflector array 4. personnel hatch 5. JAKA-2 phaser banks 6. lounge viewport 7. Star Fleet standard shuttlecraft 8. propulsion section support pylons 9. impulse amplification crystal (primary) 10. impulse amplification crystal (secondary) 11. impulse drive fusion reactor covers 12. warp field reflector 13. LN-90 Mod 1 warp drive units

class vessel is an even more formidable task because of its very negligible "subspace signature." The resulting warp bubble creates an almost insignificant turbulence reading on threat force sensor systems. Additional stealth advantages are achieved by the inclusion of a countermeasures subsystem within the ships' respective cloaking systems - the "Orissa" units in the *Akyazi* group and the DCA/DSA configuration in the *Arbiter* sub-class. These subsystems provide the PAs with the ability to produce false sensor images, multiple sensor echoes, and/or contradictory recognition readings in an attempt to further confuse and deceive threat force detection systems and their operators. This array of features helps make the *Akyazi*-class perimeter action ships

more difficult to detect than other Class One starships of similar size.

These ships are fitted with the NAVCAS Select primary navigation suite. This is a modified and downsized version of the system currently in use aboard *Cyane* (FH 1890)-class heavy frigates.

The Kuchata-built "Illoin" Duotronic computer system is supplemented by the Datatac subsystem in the SFD-built ships only. The Datatac support units were provided to more efficiently augment those ships' phaser systems, since all of the other vessels in this sub-class carry an additional pair of single mount phaser banks (see *Weapons*).



*Engineering:* The "Fier" LN-90 warp units are fitted in all ships. These engines are the progenitors of the later LN-91 and (to a slightly lesser extent) LN-94 models (see *Arbiter* and *Akula* sub-classes). Vickers Engineering was awarded the contract to design the units specifically for this class.

The FORS emergency impulse units were incorporated into the *Akyazi* sub-class late in the design stage. There was much debate and disagreement among senior members of the design team and Star Fleet officials about the need for the units. In the end, however, the survival of the ship and crew were deemed paramount and the FORS units were incorporated into the bottom of the primary hull. In the event they are needed (primary hull integrity must be maintained and the entire propulsion package must be abandoned), the ship's RCS system must first flight-correct the hull to its destination coordinates. After the covers are blown, the emergency impulse units can be engaged with both the enhanced QASR units and the RCS system providing in-flight adjustment. The FORS system has its own fuel supply (30 cells, 15 for each unit) and can be fired continuously at full power for approximately 260 hours. This provides the ship and its surviving crew with the potential ability to reach a nearby outpost, deep space station, or, at the very least, access a communications lane to relay a rescue signal if the ship's own communication system has failed.

*Weapons:* The JAKA series phaser banks are fitted in the *Akyazi* class. This is a high-output phaser system with the capability of delivering a more powerful phaser discharge (in brief salvos) than any other system currently in use aboard Class One starships. A total of eight banks (including two on the impulse platform) are fitted in all but the SFD-built ships, which have six.

The *Akyazi* sub-class utilizes a three-tube photon torpedo system - two "Komati" bow units and one "Boris" stern unit. Both the photon torpedo assemblies and the JAKA phaser units are directed by the enhanced "Nike" weapon system, which was developed by Keindoffer-Klaatsen especially for the *Akyazi* class. The later Arbing & Lidde ships, beginning with the *Bengal* (PA 1021), have the "Merlin II" unit supplemented by the CIDSS (heavy) Deflector Supplement, which is more powerful than the standard CIDSS configuration.

*Operational:* The *Eleusis* (PA 1018) and *Acavus* (PA 1025) engaged Orion vessels near the Klingon border on 11 January 2287. The four Orion craft were surveilled by intelligence units for several stardates and were known to be engaged in smuggling operations. After a brief skirmish, all four ships were rendered threat-negative when

their propulsion systems were neutralized by torpedo salvos from *Eleusis* and *Acavus*. This marked the first battle action involving *Akyazi*-class perimeter action ships.

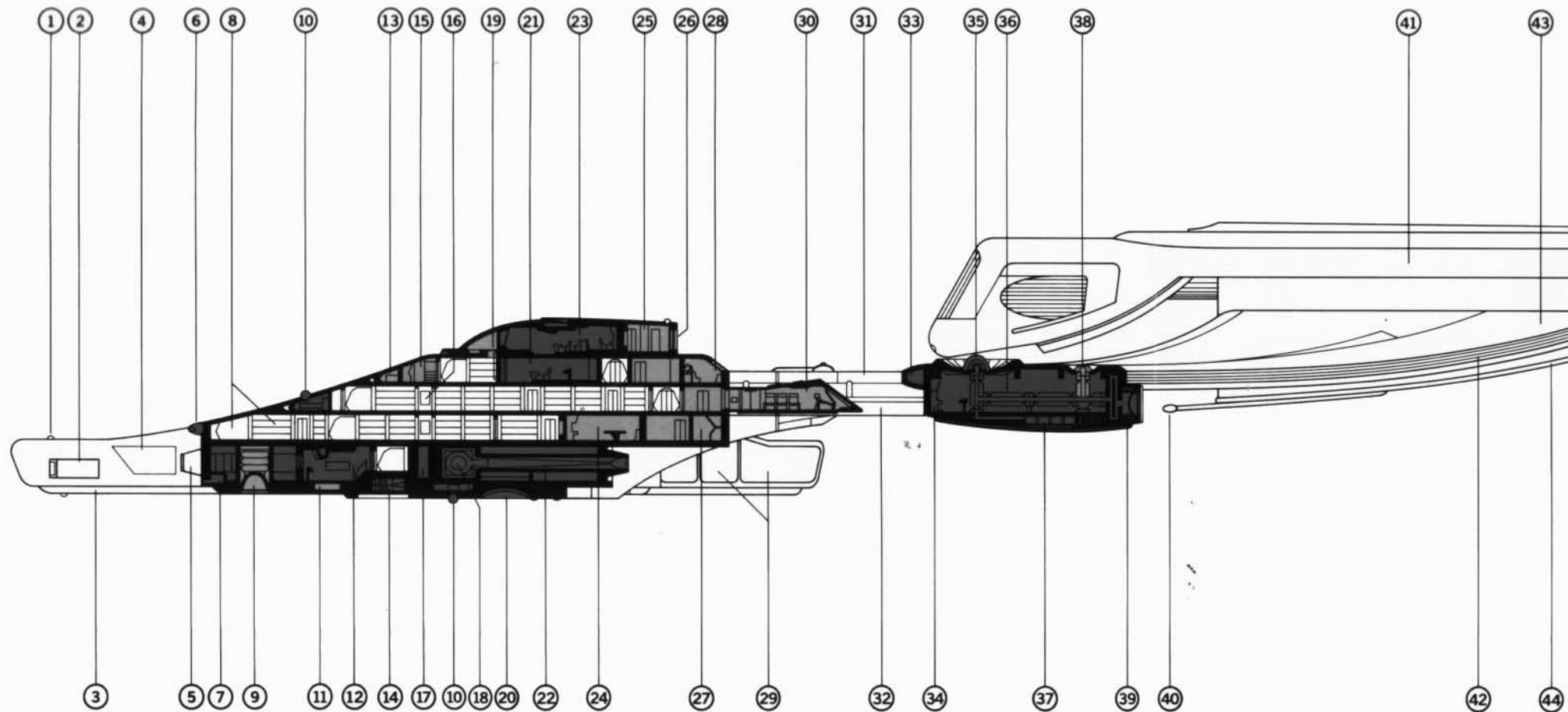
The first encounter with Klingon forces occurred on 27 April 2287. In an unmistakable attempt to gain information on PA performance characteristics, the battle skiffs *K'trk* and *K'ls* ventured more than seven parsecs into Federation territory. The *Akitsu* (PA 1012) was forced to challenge the ships near Korta Fe. The Klingons responded with disruptor fire and the initiation of a predetermined attack maneuver. The *Akitsu* jumped to warp and in less than two minutes had eliminated the offensive capability of *K'trk* and forced the retreat of a badly damaged *K'ls*.

Two members of the *Akyazi* sub-class were not as fortunate as their aforementioned sister ships. On 03 April 2289, the *Abreus* (PA 1017) responded to a distress call from what was believed to be a TacFleet intelligence ship. Upon arriving at the confirmed coordinates in the three south area, however, the *Abreus* was ambushed by no fewer than seven hostile vessels. Debris analysis revealed the weaponry to be of Romulan origin, but Star Fleet intelligence experts believe units of a Klingon *Hung nawlogh* (perhaps utilizing Romulan vessels) were responsible.

The *Arauca* (PA 1029) encountered heavily-armed, unidentified spacecraft at the subquadrant four north perimeter on stardate 8922.6. Due to deployment limitations in the area, the *Arauca* was forced to "shadow" the unidentified units in an attempt to gain information and stall for time. After a period of several hours the *Arauca* was informed by an area command ship that Star Fleet contact specialists were too far distant to provide immediate assistance. With the alien vessels moving closer to sensitive installations and deeper into Federation space, the *Arauca* was forced to confront the ships on 8922.79. After transmitting linguacode friendship messages and attempting to communicate by other methods, the *Arauca* engaged the unidentified spacecraft after being fired upon three times. The ensuing battle saw the *Arauca* destroyed after inflicting significant amounts of damage on several of the unidentified units, as indicated by the ship's recorder marker. Second tier perimeter units arrived too late to provide assistance. The alien ships are believed to have withdrawn beyond Treaty territory; additional Fleet units were assigned to the area and Star Fleet's investigation is continuing.

*Nomenclature:* All of the perimeter action ships in the *Akyazi* sub-class have names that begin with the letter 'A,' 'B,' or 'E.'





# AKYAZI GROUP Class One - Mk XXV INBOARD PROFILE CUTAWAY

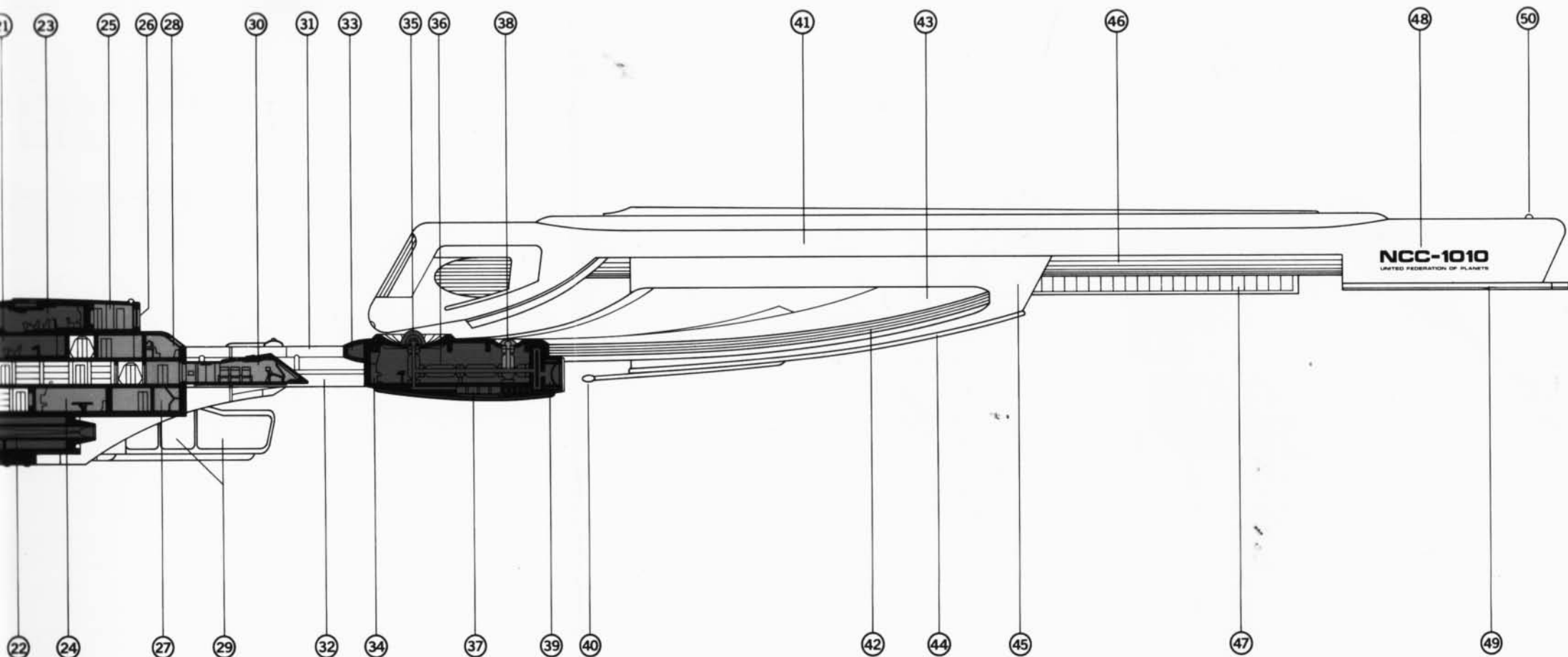
## SECTIONAL KEY

- OPERATIONAL AREA
- SUPPORT AREA
- CREW QUARTERS
- CORRIDOR/PASSAGEWAY

Scale 1:570

## COMPONENT KEY

- |                                                         |                                        |
|---------------------------------------------------------|----------------------------------------|
| 1. BOW LIGHT                                            | 18. PHOTON TORPEDO CONTAINMENT CHAMBER |
| 2. QASR MANEUVERING THRUSTER                            | 19. LADDERWAY TO DECK 2                |
| 3. SENSOR PLATFORM                                      | 20. McCOOK PRIMARY SENSOR ARRAY        |
| 4. PHOTON TORPEDO FLASH SHIELDS                         | 21. TACTICAL SITUATION ROOM            |
| 5. MK 5 KOMATI TORPEDO TUBE                             | 22. MK 9 BORIS TORPEDO TUBE            |
| 6. OCHU DEFLECTOR ARRAY                                 | 23. BRIDGE                             |
| 7. PROBE LAUNCH                                         | 24. SICKBAY                            |
| 8. CORRIDOR                                             | 25. DECK 1 DOCKING AREA                |
| 9. QASR MANEUVERING THRUSTER (EMERGENCY FLIGHT POSTURE) | 26. DECK 1 DOCKING PORT                |
| 10. JAKA-2 PHASER BANK                                  | 27. SECURITY SECTION                   |
| 11. EMERGENCY EJECT (WEAPONS CREW)                      | 28. VIEWING LOUNGE                     |
| 12. FORWARD TORPEDO CONTROL                             | 29. SENSOR PALLETS                     |
| 13. SHIP'S BATTERY POWER                                | 30. STAR FLEET STANDARD SHUTTLE        |
| 14. INTELLIGENCE DRONE LAUNCH                           | 31. PROPULSION SECTION SUPPORT PYLON   |
| 15. CREW QUARTERS                                       | 32. PYLON TRANSFER TUBE                |
| 16. COMPUTER CORE ACCESS                                | 33. EMERGENCY FLUSH INTAKE MACHINERY   |
| 17. WEAPONS COMPUTER CORE                               | 34. ENGINEERING COMPUTER               |

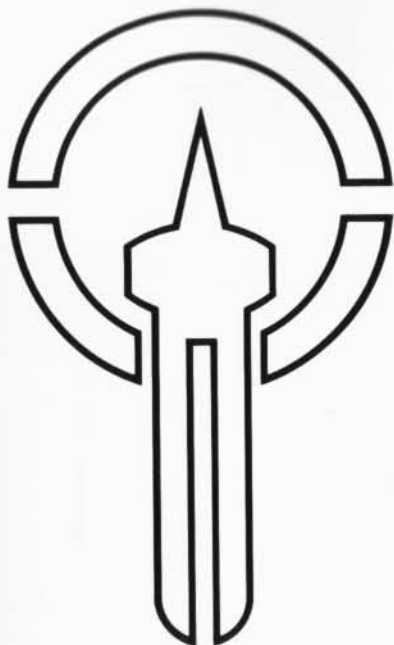


## COMPONENT KEY

1. BOW LIGHT
2. QASR MANEUVERING THRUSTER
3. SENSOR PLATFORM
4. PHOTON TORPEDO FLASH SHIELDS
5. MK 5 KOMATI TORPEDO TUBE
6. OCHU DEFLECTOR ARRAY
7. PROBE LAUNCH
8. CORRIDOR
9. QASR MANEUVERING THRUSTER (EMERGENCY FLIGHT POSTURE)
10. JAKA-2 PHASER BANK
11. EMERGENCY EJECT (WEAPONS CREW)
12. FORWARD TORPEDO CONTROL
13. SHIP'S BATTERY POWER
14. INTELLIGENCE DRONE LAUNCH
15. CREW QUARTERS
16. COMPUTER CORE ACCESS
17. WEAPONS COMPUTER CORE

18. PHOTON TORPEDO CONTAINMENT CHAMBER
19. LADDERWAY TO DECK 2
20. McCOOK PRIMARY SENSOR ARRAY
21. TACTICAL SITUATION ROOM
22. MK 9 BORIS TORPEDO TUBE
23. BRIDGE
24. SICKBAY
25. DECK 1 DOCKING AREA
26. DECK 1 DOCKING PORT
27. SECURITY SECTION
28. VIEWING LOUNGE
29. SENSOR PALLETS
30. STAR FLEET STANDARD SHUTTLE
31. PROPULSION SECTION SUPPORT PYLON
32. PYLON TRANSFER TUBE
33. EMERGENCY FLUSH INTAKE MACHINERY
34. ENGINEERING COMPUTER

35. IMPULSE AMPLIFICATION CRYSTAL (PRIMARY)
36. MATTER/ANTIMATTER PROPULSION SHAFT
37. ANTIMATTER CONTAINMENT
38. IMPULSE AMPLIFICATION CRYSTAL (SECONDARY)
39. CCE IMPULSE ENGINE
40. DEFLECTOR SPIRE
41. LN-90 MOD 1 WARP DRIVE UNIT
42. EMERGENCY FLUSH VENTS
43. WARP ENGINE SUPPORT PYLON
44. SENSOR EMPLACEMENT
45. DEFLECTOR SPIRE DISSIPATION ASSEMBLY
46. WARP FIELD GENERATOR ASSEMBLY
47. WARP FIELD REFLECTOR
48. VESSEL IDENTIFICATION
49. INTERCOOLER ASSEMBLY
50. FORMATION LIGHT



# ARBITER

## Group Perimeter Action Ships

Like their earlier sister ships, vessels of the *Arbiter* sub-class were designed to be fast, stealthy, and well-armed. These 41 ships (the *Arashi* [PA 1051] was lost on 17 February 2288) represent the intermediate construction group, bearing much greater resemblance to the *Akyazi* sub-class than to the later *Akula* ships. Building on the basic *Akyazi* design, they are augmented with the "Iulus" Protective Envelope system and an additional rear-firing torpedo tube. Construction of this sub-class was delayed to take advantage of both the "Iulus" system and the ASL series emergency impulse units, neither of which was available when the *Akyazi* sub-class began building in 2284.

**Class:** These ships were officially ordered on 02 October 2284, almost 14 months after the *Akyazi* sub-class. There was some debate as to how many ships to include in this group and how many to build to the substantially different *Akula* design. Long-range deployment scenarios required a minimum of 20 ships of the *Akula* design. By increasing the number of *Arbiter*-type ships from 35 to 42 vessels, Star Fleet was still able to meet its minimum requirement for *Akula*-type construction. The number and frequency of threat force aggressive actions during this period was a factor in this decision, as was the more expensive per-unit cost of the *Akula* PA design.

March 2284/Stardate 8315.6 -

Temerand design teams, working closely with the designers of the "Iulus" Protective Envelope system and the ASL emergency impulse package, develop modifications to the basic *Akyazi* design which allow for the incorporation of these units.

April 2284 -

TacFleet returns Prototype No. 1 after concluding security evaluation tests on the basic *Akyazi* design. Seventeen modifications are required, including improvement of long-range sensor capability and relocation of the internal security area.

Star Fleet clears access to the No. 2 and 3 prototypes after *Akyazi* design finalization is completed. Temerand begins substructure improvement tests for the *Arbiter* design (some of the resulting improvements will be incorporated into later ships of the *Akyazi* sub-class). Temerand's prototypes 4 through 11, all completed between early-March and mid-April, are activated for testing and evaluation studies.

May 2284 -

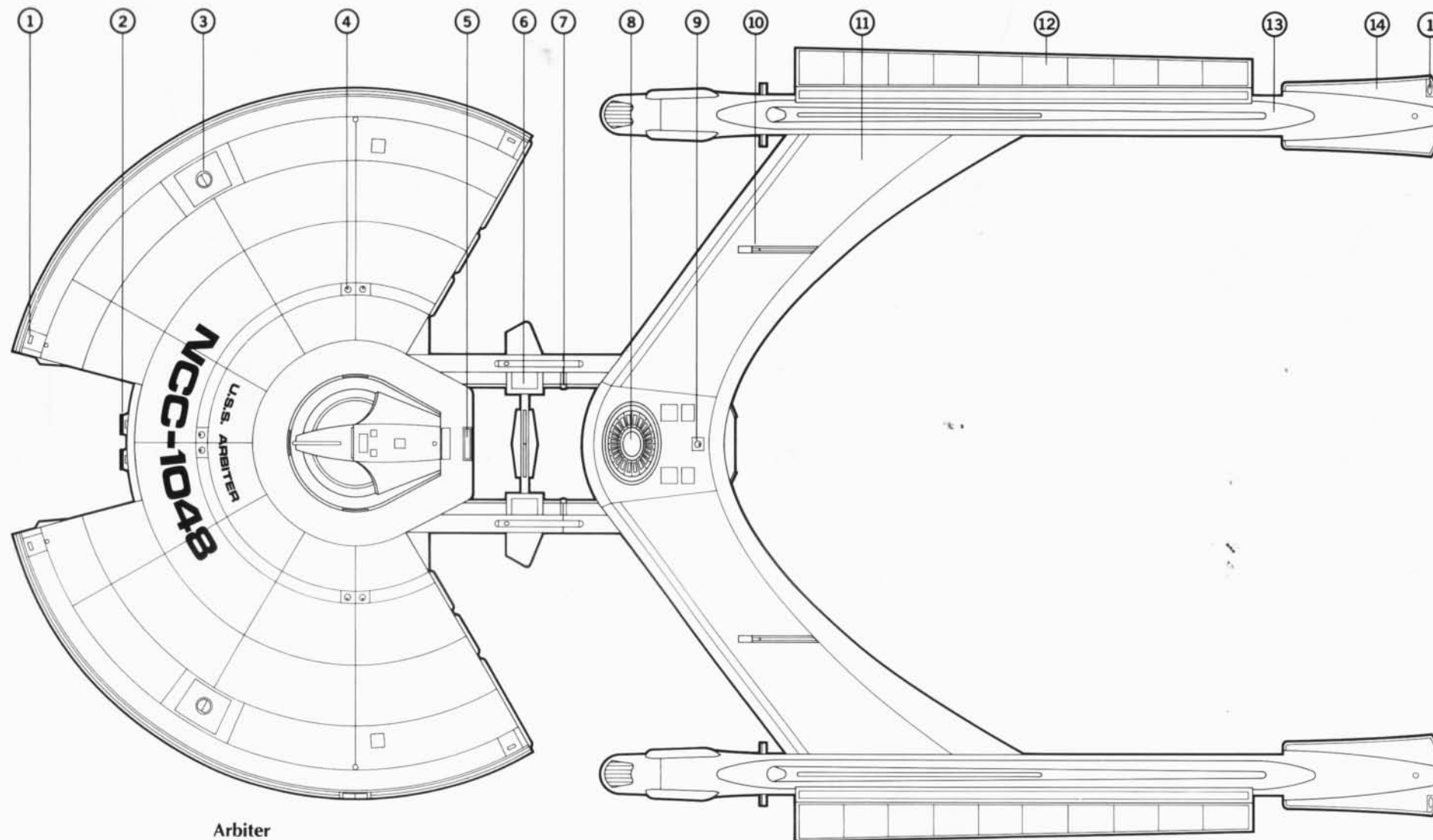
The April delivery of additional prototypes enables simultaneous evaluations to be conducted by Temerand and Star Fleet, further accelerating the *Akyazi* and *Arbiter* test programs. Fleet Performance Evaluation trials are conducted beginning 17 May, analyzing various factors including warp flight characteristics, task force capability, humanoid dynamics, and operational reliability. Assignment of the prototype PAs to the manufacturer or the Fleet and their testing designations are announced:

Prototype No. 1 (Temerand) - Undergoing reconfiguration per TacFleet requirements. Devoted to internal structural buildup to *Akyazi* specifications.

Prototype No. 2 (Temerand) - Assigned to warp structural stress analyzation testing. Warp engine pylon "sweep angle" is increased and engine height above centerline is adjusted.

Prototype No. 3 (Temerand) - Devoted to actual and like-systems integration on a complex (near-operational) scale, including secondary and redundant units. Scheduled to conduct the majority of maintenance and reliability demonstrations and testing.

Prototype No. 4 (Temerand) - Known as the "impulse ship," assigned to sub-light propulsion testing and evaluation, including multiple-redundant studies of the ASL emergency thrust units.



#### Arbiter

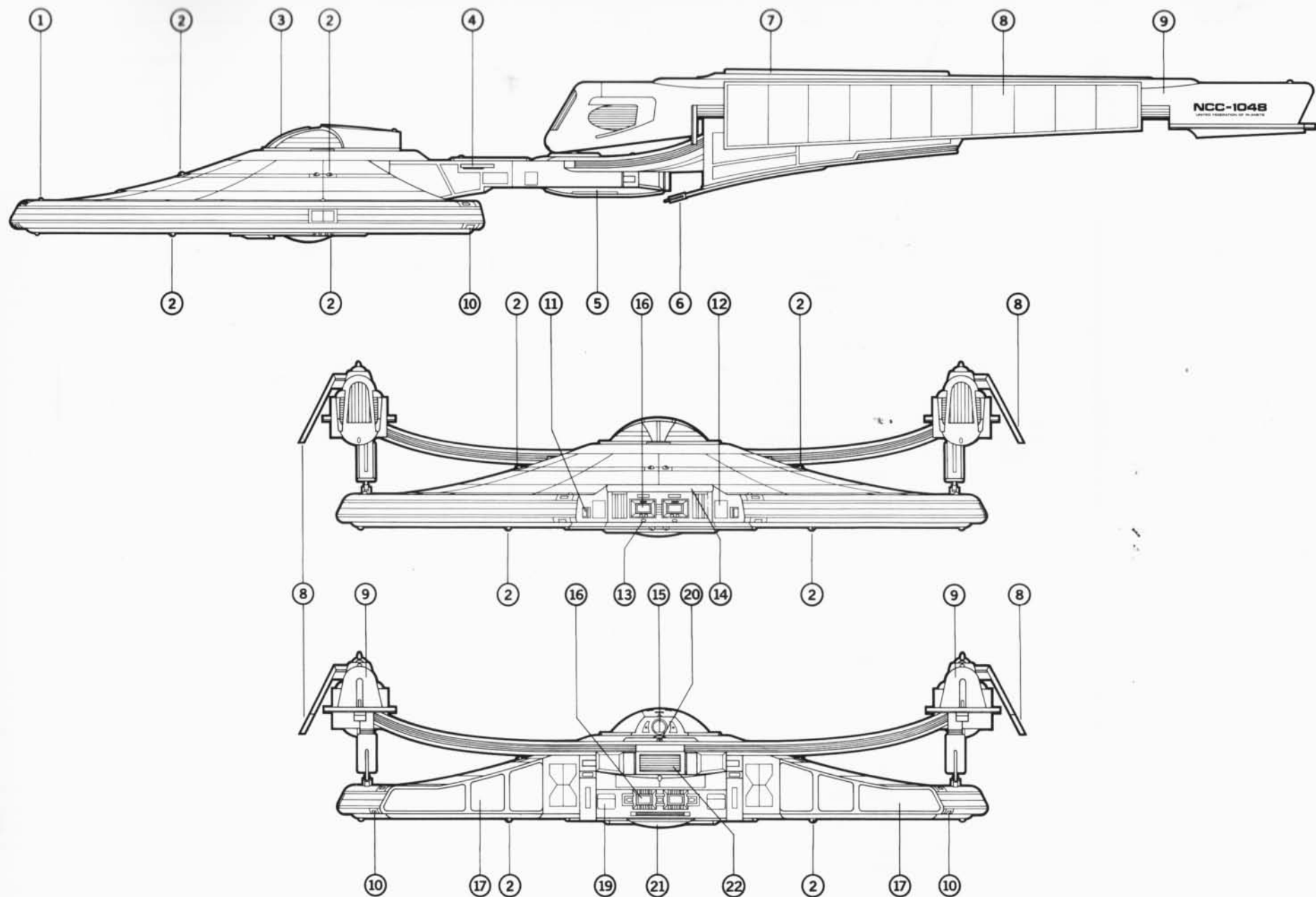
1. Kenelex reaction control system 2. Mk 20 Teviot torpedo tubes 3. topside docking ports 4. JAKA-2 phaser banks 5. lounge viewport 6. Iulus Protective Envelope generator 7. explosive bolt separation 8. impulse amplification crystal 9. JAKA-5 phaser bank 10. sensor emplacement 11. warp engine support pylons 12. warp field reflector 13. LN-91 Mod 1 warp drive units 14. intercooler assembly

Prototype No. 5 (Star Fleet) - Loaned to Prentice-Schafer for incorporation and evaluation of the "Iulus" Protective Envelope deflector system. Additional (experimental) defensive units tested, including the "Portico" sectional deflector system and "Jort" series deflector spires.

Prototype No. 6 (Star Fleet) - Assigned to Starbase 6 for evaluation of the "Nike" (enhanced) weapon system and related subsystems. Operational (live-fire) phaser and photon torpedo systems installed and activated for evaluation with the "Nike" unit.

Prototype No. 7 (Star Fleet) - Assigned to Starbase 8 for testing of task force compatibility and capacity to interface with established Class One Fleet units in a variety of multi-ship scenarios.

Prototypes No. 8, 9, 10 (Star Fleet) - Designated flight training craft for command crew compatibility and familiarity evaluations. Those senior officers that have been assigned to Akyazi class command crews begin rotation to these fully-outfitted prototypes for "operational familiarity" deployments of limited duration. Crew assignment and mix is based on the present availability of the officers who are called. Rotations begin out of Starbase 2.



### Arbiter

1. bow light 2. JAKA-2 phaser banks 3. bridge deflector shield enhancement 4. lulus generator vanes 5. engineering pod 6. deflector spires 7. sensor emplacement 8. warp field reflector 9. LN-91 Mod 1 warp drive units 10. Kenelex reaction control system 11. QASR maneuvering thrusters 12. photon torpedo flash shields 13. probe launch tubes 14. Ochu II deflector array 15. bridge docking port 16. Mk 20 Teviot torpedo tubes 17. sensor pallets 18. ASL emergency impulse engines 19. workbee stowage 20. JAKA-5 phaser bank 21. Efiro primary sensor array 22. CME impulse engine

| Number   | Name            | Builder                                                         | Laid Down    | Launched     | Commissioned | Status     |
|----------|-----------------|-----------------------------------------------------------------|--------------|--------------|--------------|------------|
| NCC-1048 | <i>Arbiter</i>  | Rodriquez Ingenieria, Lima, Earth                               | 24 July 2285 | 21 Aug 2286  | 09 Apr 2287  | ATAC       |
| NCC-1049 | <i>Acerra</i>   | Rodriquez Ingenieria, Lima, Earth                               | 21 Sept 2285 | 02 Nov 2286  | 10 May 2287  | ATAC       |
| NCC-1050 | <i>Juist</i>    | Star Fleet Division, Puget Sound Yards, Earth                   | 15 Aug 2285  | 22 Oct 2286  | 02 Apr 2287  | ATAC       |
| NCC-1051 | <i>Arashi</i>   | Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth | 23 Nov 2285  | 11 Jan 2287  | 27 June 2287 | Lost       |
| NCC-1052 | <i>Atago</i>    | Rodriquez Ingenieria, Lima, Earth                               | 14 Dec 2285  | 05 Mar 2287  | 15 Sept 2287 | ATAC       |
| NCC-1053 | <i>Apia</i>     | Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran              | SD 7922.17   | SD 7962.45   | SD 7979.83   | ATAC       |
| NCC-1054 | <i>Tensas</i>   | Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran              | SD 7964.28   | SD 7993.51   | SD 8012.91   | ATAC       |
| NCC-1055 | <i>Thun</i>     | Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth | 09 Dec 2286  | 19 Feb 2288  | 12 Aug 2288  | ATAC       |
| NCC-1056 | <i>Atessa</i>   | Star Fleet Division, Puget Sound Yards, Earth                   | 22 July 2286 | 18 Oct 2287  | 04 Apr 2288  | ATAC       |
| NCC-1057 | <i>Jico</i>     | Star Fleet Division, Puget Sound Yards, Earth                   | 08 Sept 2286 | 30 Dec 2287  | 15 July 2288 | ATAC       |
| NCC-1058 | <i>Jari</i>     | Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran              | SD 7987.64   | SD 8024.47   | SD 8038.36   | ATAC       |
| NCC-1059 | <i>Armavir</i>  | Rodriquez Ingenieria, Lima, Earth                               | 17 Aug 2286  | 05 Sept 2287 | 20 Feb 2288  | ATAC       |
| NCC-1060 | <i>Artika</i>   | Rodriquez Ingenieria, Lima, Earth                               | 21 Jan 2287  | 27 Mar 2288  | 29 Aug 2288  | ATAC       |
| NCC-1061 | <i>Jelai</i>    | Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran              | SD 8030.40   | SD 8062.51   | SD 8074.76   | ATAC       |
| NCC-1062 | <i>Talence</i>  | Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth | 12 Apr 2287  | 28 Apr 2288  | 10 Sept 2288 | ATAC       |
| NCC-1063 | <i>Tioga</i>    | Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth | 27 Feb 2288  | 04 May 2289  | 01 Nov 2289  | ATAC       |
| NCC-1064 | <i>Thrace</i>   | Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth | 19 May 2288  | 15 June 2289 | 13 Dec 2289  | ATAC       |
| NCC-1065 | <i>Julin</i>    | Seskon Trella (Starcraft Design Section), Chagala, Tellar       | SD 7721.50   | SD 7765.24   | SD 7777.35   | ATAC       |
| NCC-1066 | <i>Tachira</i>  | Seskon Trella (Starcraft Design Section), Chagala, Tellar       | SD 7914.62   | SD 7950.81   | SD 7969.07   | ATAC       |
| NCC-1067 | <i>Almdes</i>   | Star Fleet Division, Puget Sound Yards, Earth                   | 24 July 2287 | 13 Oct 2288  | 09 Mar 2289  | ATAC       |
| NCC-1068 | <i>Abitibi</i>  | Star Fleet Division, Puget Sound Yards, Earth                   | 01 May 2288  | 17 July 2289 |              | Building   |
| NCC-1069 | <i>Archer</i>   | Seskon Trella (Starcraft Design Section), Chagala, Tellar       | SD 8075.32   | SD 8104.55   |              | Building   |
| NCC-1070 | <i>Aversa</i>   | Rodriquez Ingenieria, Lima, Earth                               | 26 May 2287  | 17 July 2288 | 06 Jan 2289  | ATAC       |
| NCC-1071 | <i>Jativa</i>   | Rodriquez Ingenieria, Lima, Earth                               | 18 Apr 2288  | 27 June 2289 |              | Building   |
| NCC-1072 | <i>Jersey</i>   | Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran              | SD 8115.74   | SD 8152.19   |              | Building   |
| NCC-1073 | <i>Tuira</i>    | Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran              | SD 8153.22   | SD 8183.25   |              | Building   |
| NCC-1074 | <i>Azusa</i>    | Temerand Duplicat, Calabay City, Mars                           | SD 8475.90   |              |              | Building   |
| NCC-1075 | <i>Trigarta</i> | Rodriquez Ingenieria, Lima, Earth                               | 30 Jan 2289  |              |              | Building   |
| NCC-1076 | <i>Arques</i>   | Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth | 10 Jan 2289  |              |              | Building   |
| NCC-1077 | <i>Aparri</i>   | Star Fleet Division, Puget Sound Yards, Earth                   | 24 Aug 2288  | 30 Oct 2289  |              | Building   |
| NCC-1078 | <i>Argus</i>    | Star Fleet Division, Puget Sound Yards, Earth                   | 13 Oct 2289  |              |              | Building   |
| NCC-1079 | <i>Tanaga</i>   | Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth | 15 Aug 2289  |              |              | Building   |
| NCC-1080 | <i>Timis</i>    | Singapore Shipbuilding & Engineering Co. Ltd., Singapore, Earth | 28 Dec 2289  |              |              | Building   |
| NCC-1081 | <i>Alava</i>    | Temerand Duplicat, Calabay City, Mars                           | SD 8500.10   |              |              | Building   |
| NCC-1082 | <i>Agtekerk</i> | Temerand Duplicat, Calabay City, Mars                           | SD 8502.37   |              |              | Building   |
| NCC-1083 | <i>Ashiya</i>   | Rodriquez Ingenieria, Lima, Earth                               | 11 Nov 2289  |              |              | Building   |
| NCC-1084 | <i>Jaro</i>     | Temerand Duplicat, Calabay City, Mars                           | SD 8691.49   |              |              | Building   |
| NCC-1085 | <i>Tinian</i>   | Sy Ris Abagon, New Aberdeen Naval Yards, Aldebaran              | SD 8179.34   |              |              | Building   |
| NCC-1086 | <i>Antibes</i>  | Temerand Duplicat, Calabay City, Mars                           | SD 8722.40   |              |              | Building   |
| NCC-1087 | <i>Arban</i>    | Temerand Duplicat, Calabay City, Mars                           |              |              |              | Authorized |
| NCC-1088 | <i>Apure</i>    | Temerand Duplicat, Calabay City, Mars                           |              |              |              | Authorized |
| NCC-1089 | <i>Aulon</i>    | Star Fleet Division, Puget Sound Yards, Earth                   |              |              |              | Authorized |

Prototype No. 11 (Temerand) - Scheduled to become the operational prototype for the *Akula* design, with LN-94 warp drive units and the "Zelus" cloaking system to be evaluated.

July 2284 -

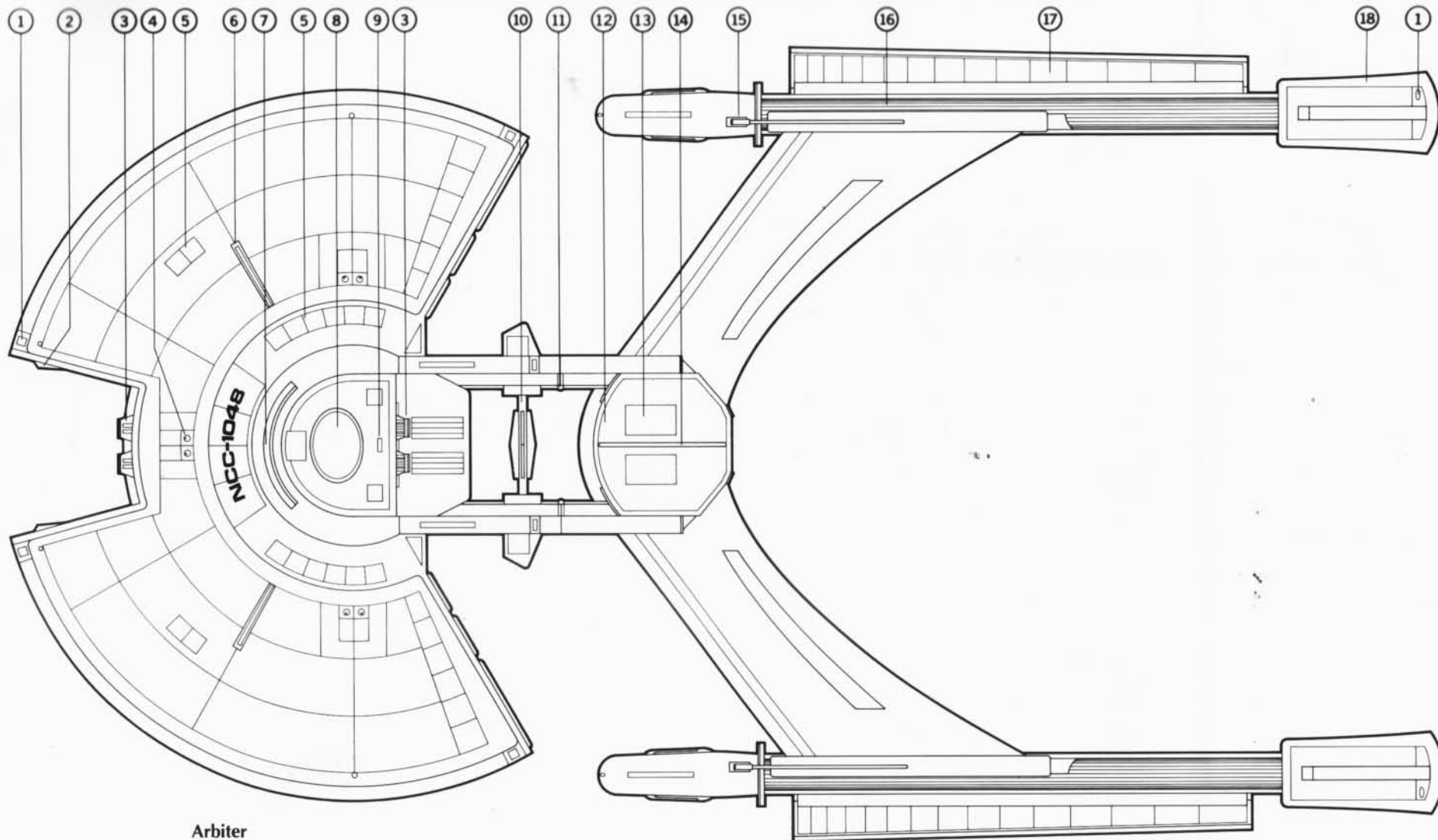
Temerand and Jeffries Transdimensional Dynamics announce they have developed a new "bottle containment" apparatus for the dilithium gas piping and antimatter conduit system. This development is the result of tests that revealed the formation of fissures in the propulsion shaft coupling units. These fissures were caused by an

overtaxing of the coupling units during high-velocity (above warp 20) warp maneuvering of Prototype No. 2, resulting in a partial or complete loss of the impulse amplification crystal. This necessitated the addition of a second, back-up amplification crystal to the *Akyazi* design. The containment apparatus will be perfected in time for inclusion in the *Arbiter* sub-class.

August 2284 -

Prototype No. 7 is shifted to TacFleet for evaluation of acceleration rates, warp braking, warp and sub-light maneuverability and "dead-weapon" war games





### Arbiter

1. Kenelex reaction control system 2. QASR maneuvering thrusters 3. Mk 20 Teviot torpedo tubes 4. JAKA-2 phaser banks 5. lifeboat emplacements 6. sensor array 7. Shim sensor assembly 8. Efir primary sensor array 9. tractor beam 10. Iulus Protective Envelope generator 11. explosive bolt separation 12. engineering pod 13. antimatter eject covers 14. engineering pod deflector vane 15. deflector spires 16. warp field generator assembly 17. warp field reflector 18. intercooler assembly

scenarios. Several classified intelligence systems are installed for testing purposes. The No. 7 ship will be "hunted" by as many as nine TacFleet adversaries in some exercises.

September 2284 -

The various design improvements and alterations to the *Arbiter* sub-class prototypes are individually evaluated. All successful adaptations are incorporated into Prototype No. 6 in order to achieve a fully operational testbed.

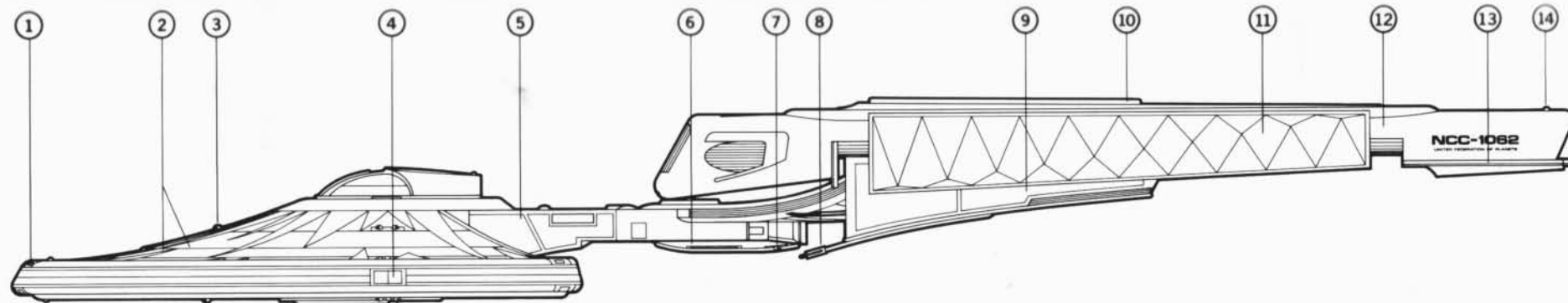
02 October 2284 -

Forty-two ships of the *Arbiter* design are officially ordered by Star Fleet on this date.

Though refinements to some systems continue, the basic external design is nearly identical to the *Akyazi* sub-class.

16 January 2285 -

A series of failures in both the antimatter conduit system and integrated coupling units during high-warp battle maneuvers leads to the loss of Prototype No. 8. None of the test vessels have been equipped with the Jeffries containment system which was completed and approved in early December 2284. The nine-member command crew escaped safely after jettisoning the entire bridge/lifeboat assembly; all five crew members in the engineering pod were killed.



### Talence

1. Kenelex reaction control system 2. deflector grid 3. JAKA-2 phaser banks 4. gangway hatch 5. propulsion section support pylons 6. engineering pod 7. JAKA-7D phaser banks 8. deflector spires 9. deflector spire dissipation assembly 10. sensor emplacement 11. warp field reflector 12. LN-91 Mod 1 warp drive units 13. intercooler assembly 14. formation light.

#### Current specifications of *Arbiter* sub-class:

Displacement: 69,250 metric tons standard  
(67,000mt light, 70,300mt full load)  
NCC-1065, 1066, 1069, 1074, 1081, 1082, 1084, 1086-88: 68,700 metric tons standard  
(66,900mt light, 70,000mt full load)

|         | Overall | Primary Hull | Nacelles |
|---------|---------|--------------|----------|
| Length: | 215.8m  | 78.9m        | 126.7m   |
| Beam:   | 120.2m  | 107.6m       | 16.2m    |
| Draft:  | 28.6m   | 19.3m        | 13.7m    |

Propulsion: Two (2) "Skade" LN-91 Mod 1 dilithium-energized antimatter linear warp drive units  
(System contractor: Vickers Engineering Group Ltd., Cumbria, Earth)  
One (1) "Delum" CME subatomic unified energy impulse unit  
(System contractor: Orage Ijek, Aksajak, Andor)  
Two (2) ASL-3 emergency impulse thrust units  
QASR enhanced particle beam maneuvering thrusters  
(Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)  
"Kenelex" pulsed laser reaction control system  
(System contractor: Orage Ijek, Aksajak, Andor)

Velocity: Warp 8, standard  
Warp 15, maximum  
Warp 22, battle maximum

Acceleration: Rest-Onset Critical Momentum: 1.98 sec  
Onset Critical Momentum-Warp Engage: .72 sec  
Warp 1-Warp 4: .19 sec  
Warp 4-Warp 8: .10 sec  
Warp 8-Warp 15: 1.38 sec  
Warp 15-Warp 22: 2.06 sec

Duration: 2 Earth years, standard  
3.25 Earth years, maximum

Complement: 77 (7 officers + 70 crew)  
NCC-1053, 1054, 1058, 1064, 1072, 1073, 1085: 80 (8 officers + 72 crew)

Embarked craft: None

Navigation: RAV/TENEC Warp Celestial Guidance  
(System contractor: Tlixis Ramab RRB, Balikan, Coridan III)

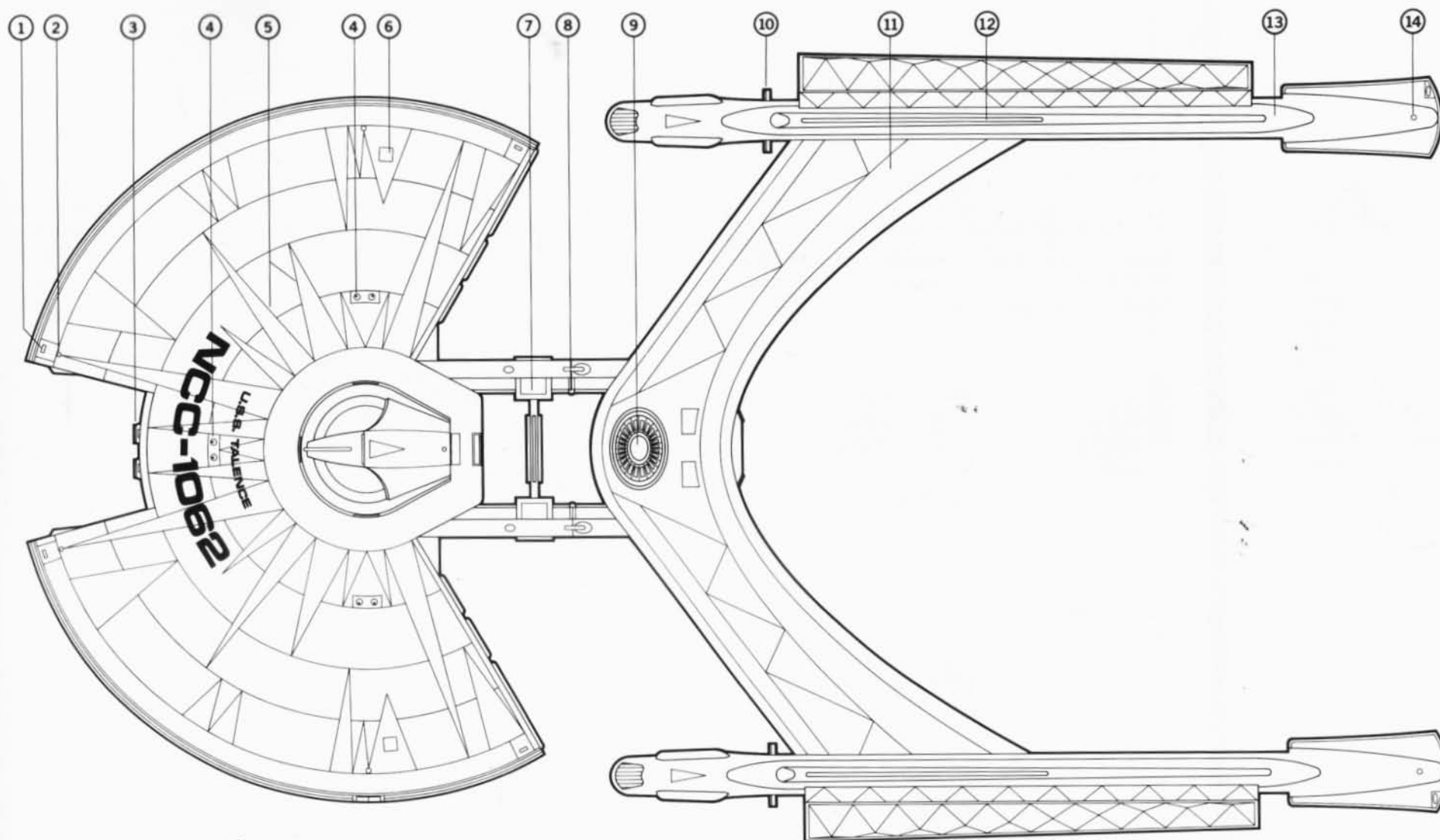
Computers: "Ilorin" Duotronic IV; "Krasnysulyn" Subsystem  
(Systems contractor: Kuchata Pratus Ikyla, Arrasta, Daran V)

Phasers: 6 banks of 2 each - JAKA-2 independent twin mount  
1 bank - JAKA-5 single mount  
NCC-1050, 1051, 1055-57, 1062-64, 1067, 1068, 1076-80, 1089:  
6 banks of 2 each - JAKA-2 independent twin mount  
2 banks - JAKA-7D single mount  
(Systems contractor: Asakaze Ordnance Systems Ltd., Honshu-Hamamatsu, Earth)

Photon torpedoes: 4 tubes - Mk 20 "Teviot" independent  
(System contractor: Arvan Toy Conglessum, Binz, Tellar)

Defense: "Merlin II" primary force field and deflector control system  
DCA/DSA cloaking generation and stasis countermeasure system  
"Iulus" Protective Envelope system  
(Systems contractor: Prentice-Schafer Inc., Marsport, Mars)  
"Nike" weapon system (enhanced)  
TAVITAC Tactical Subsystem  
(Systems contractor: Keindoffer-Klaatsen DSC, Munich, Earth)  
"Podi Aschura" deflector spires  
(System contractor: Kal Achal Conglessum, Takuv, Tellar)

Life support: MCH1 Modular Gravity and Atmosphere Maintenance Unit  
(System contractor: Cristobal SM/S, Manila, Earth)  
ARU/SI radiation protection systems  
(System contractor: Kym Lan Den Terra, New Kyoto, Earth)  
"Lenix-B" waste regeneration systems  
(System contractor: Jullundur-Lahore Ltd., Bombay, Earth)



#### Talence

1. Kenelex reaction control system 2. bow lights 3. Mk 20 Teviot torpedo tubes 4. JAKA-2 phaser banks 5. deflector grid 6. personnel hatch 7. Iulus Protective Envelope generator 8. explosive bolt separation 9. impulse amplification crystal 10. primary flow sensor 11. warp engine support pylons 12. sensor emplacement 13. LN-91 Mod 1 warp drive units 14. formation light

March 2285 -

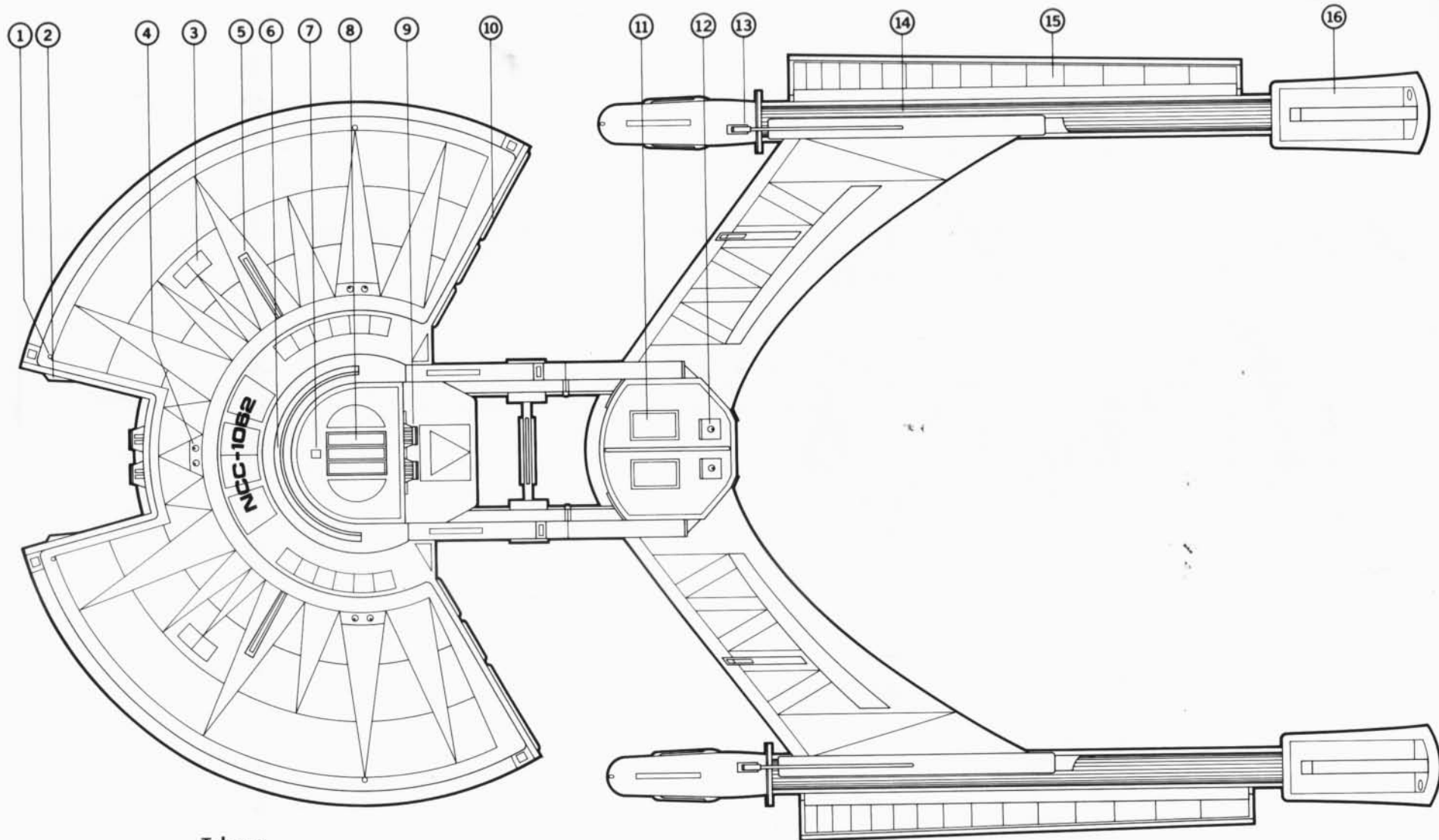
Construction on the *Akyazi* (PA 1010) and *Akitsu* (PA 1012) is delayed at Arbing & Lidde to allow for the incorporation of various design improvements, including modification and reinforcement of the bridge/lifeboat configuration and minor rearrangement of the internal bracing within the double boom structure. These changes are the result of improvements made to the prototypes during the *Arbiter* test program.

24 July 2285 -

Work begins on the *Arbiter* (PA 1048) at Rodriguez Ingenieria, Lima, Earth.

**Classification:** The *Arbiter* sub-class was ordered as the middle construction group of the *Akyazi*-class perimeter action ships, reflecting various design improvements within the same hull form. This group includes hull numbers 1048 through 1089, inclusive.

**Design:** These ships, like their sisters in the *Akyazi* sub-class, are much more "stealthy" than had been anticipated when they were originally conceived. They benefit from the same hull form but are slightly faster and carry greater firepower. The *Juist* (PA 1050) was the first ship commissioned and was delivered with only 28 contract deficiencies; the *Arbiter* (PA 1048) was launched on 21 August 2286, six days before



#### Talence

1. bow light 2. QASR maneuvering thrusters 3. lifeboat emplacements 4. JAKA-2 phaser banks 5. sensor emplacements 6. Shim sensor assembly 7. tractor beam 8. Tirpit primary sensor array 9. Mk 20 Teviot torpedo tubes 10. sensor pallets 11. antimatter eject covers 12. JAKA-7D phaser banks 13. deflector spires 14. warp field generator assembly 15. warp field reflector 16. intercooler assembly

the first ship of the *Akyazi* group (*Acavus* [PA 1025]) was commissioned.

The exterior angle of the primary hull leading edge was inverted in the *Arbiter* design (and in the last nine ships of the *Akyazi* sub-class) after warp field formation and propagation tests conducted on Prototype No. 2 revealed enhanced warp handling characteristics with the new design. The primary deflector array is located immediately above the forward photon torpedo assembly (as in the *Akyazi* sub-class); it has been upgraded from the standard "Ochu" units in the *Akyazi* ships and provides the forward torpedo tubes (and the entire ship) with even greater protection. The flash shields were also enlarged to provide more protective coverage.

Several ships of this group were provided with three docking ports - one at the 01 bridge level and two additional ports on the primary hull topside. After construction of the sub-class had begun, it was decided that the two primary hull docking port locations would be a potential weak point in battle situations (despite structural reinforcement) and the topside ports were deleted in all but the early ships (PA 1048-52, 1055, 1056). Because of the location of the "Iulus" Protective Envelope generator, this leaves a majority of the *Arbiter* group vessels with only one docking port (at the 01 level).

The RAV/TENEC navigation suite is a defensive refinement of the Tlixis-built RAV/



ISHAK navigation unit currently being installed in the uprated *Enterprise* (CH-1701)-class heavy cruisers.

A mandate by TacFleet early in the design stage required all ships of the *Akyazi* class to be able to function as mobile borderspace "listening posts" if required. As a result, all *Akyazi*-class PAs (including the *Arbiter* group) are equipped with a multitude of listening devices and highly sensitive scanning apparatus, located at strategic points on the ships' hulls. Among those units mounted are the Gufurdi long-range pallet, ADI 95000 series capaldic imager, and Shim combined field sensor system.

Most of these ships are fitted with the Efiro primary sensor array, located on the bottom of the primary hull. However, the ships constructed by Singapore Shipbuilding are equipped with the Tirpit sequenced primary sensor unit. They also carry three additional personnel in the standard crew complement due to internal arrangement variations.

**Engineering:** Like their *Akyazi* sister ships, the warp drive system for the *Arbiter* sub-class was designed and built by Vickers Engineering Group. However, these ships are equipped with the slightly more powerful "Skade" LN-91 warp units in place of the "Fier" system of the earlier ships. As with the LN-90 configuration (and the "Kratos" system - see *Akula* sub-class), the "Skade" engines utilize a warp reflector assembly to "bounce" or reflect the transmissive warp energies between the two engines, passing the warp field underneath the ship in the process. This method of warp field manipulation greatly enhances the maneuverability of all *Akyazi*-class PAs and is a key element in their ability to achieve such high warp velocities.

The "Delum" CME impulse engine represents a one-model improvement over the CCE units of the *Akyazi* group. The CME system is slightly more powerful.

The FORS emergency impulse units of the *Akyazi* group were deleted in the *Arbiter* design in favor of the more conventional ASL system. Like the FORS system, the ASL-3 units carry a total of 30 fuel cells. They can be fired continuously at 100% power expenditure for approximately 230 hours, achieving .29c in the process.

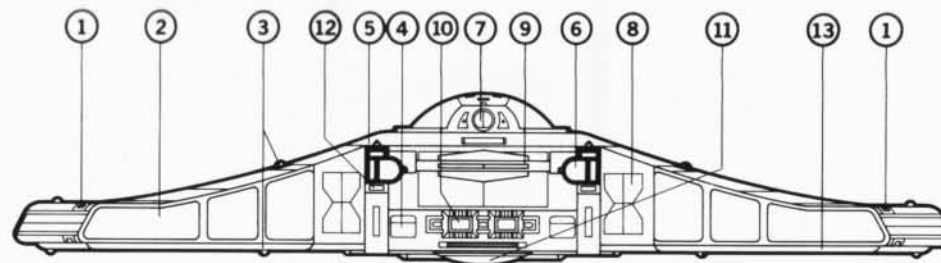
The shape of the warp engine support pylon assembly has been changed and its overall structural configuration improved from the original design (see *Akyazi* sub-class).

**Weapons:** The defensive suite of the *Arbiter* group is identical for all of the ships in the sub-class. As in the *Akyazi* group, the peripheral systems are centered around the performance characteristics of the enhanced "Nike" weapon system. "Podi Aschura" deflector spires replace the "Saco Onorvoz" units of the earlier ships.

The "Iulus" Protective Envelope system acts as a secondary unit to the "Merlin II" primary configuration. The "Iulus" system can be engaged in critical situations, providing superior protection at the expense of greater power consumption.

The majority of the *Arbiter* group ships have a single JAKA-5 phaser bank mounted on the warp engine support pylon (above the impulse deck). This is in addition to the standard six banks mounted on the primary hull. The SFD- and Singapore-built ships replace the JAKA-5 unit with two single mount JAKA-7D phaser banks mounted on the underside of the engineering pod. The Mk-20 "Teviot" photon torpedo system is fitted in all ships, with two tubes forward and two tubes aft.

**Operational:** Among the many readiness exercises conducted during the early operational service lives of the *Akyazi* class, several are notable for a variety of reasons. Foremost among these is the Makus Fleet Maneuver, conducted in the vicinity of that frontier planet in February 2288. The PAs *Amagi* (PA 1016), *Bucke* (PA 1020), *Eiger*



**Arbiter** (cross-section at pylon bolt, frame 251)

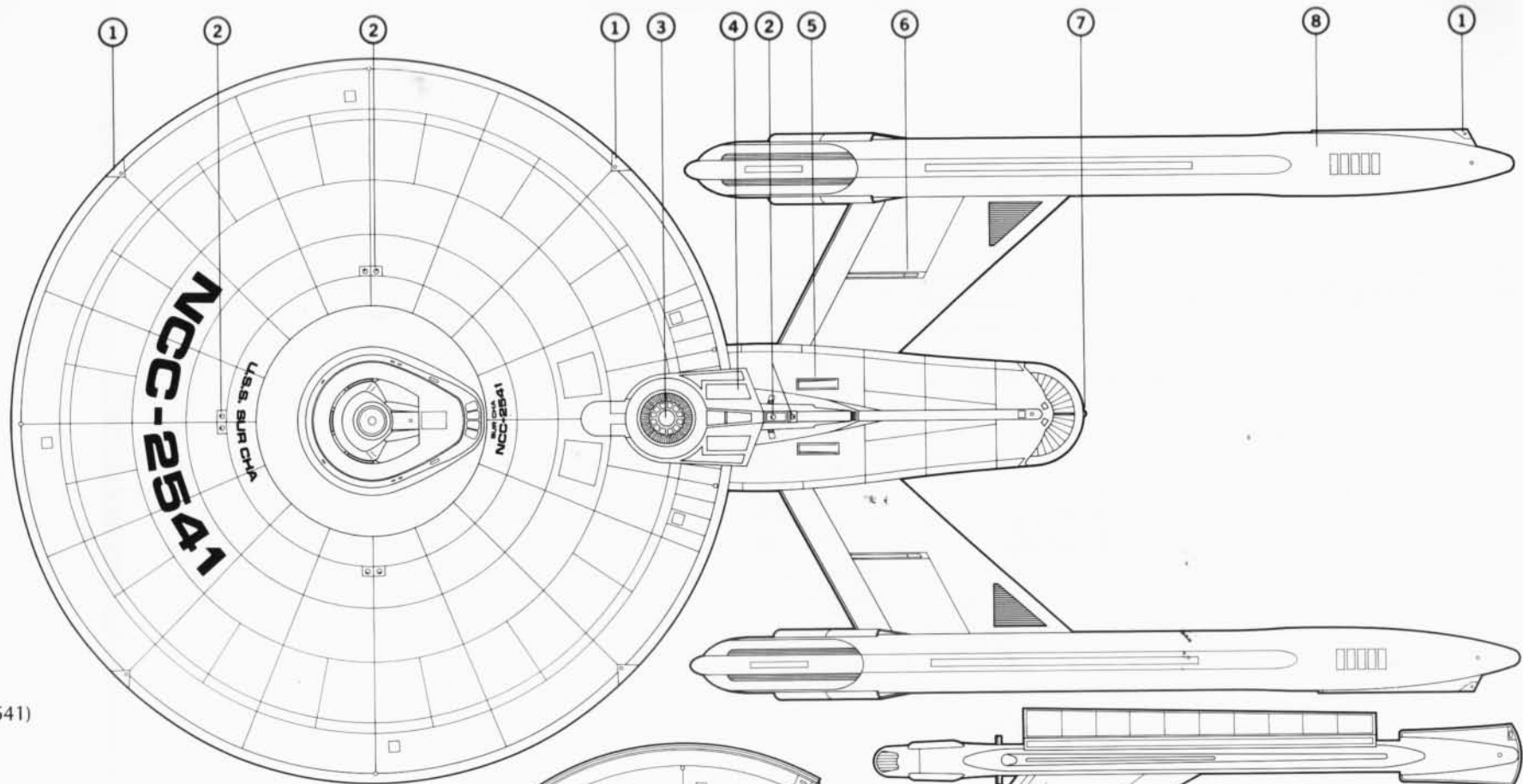
1. Kenelex reaction control system
2. sensor pallets
3. JAKA-2 phaser banks
4. workbee stowage
5. structural bulkheads
6. pylon transfer tube
7. docking port
8. ASL emergency impulse engines
9. Iulus Protective Envelope generator
10. Mk 20 Teviot torpedo tubes
11. Efiro primary sensor array
12. QASR maneuvering thrusters
13. sensor platform

(PA 1031), *Arashi* (PA 1051), and *Apia* (PA 1053) were allied against a force of three heavy frigates and the heavy cruiser *Monitor* (CH 1713). For the first three hours of the exercise the PA force was limited to minor scoring in the dead-weapon scenario. At +3.42, the *Eiger* and *Arashi* entered warp while in pursuit of the *Monitor*. When the captain of the *Monitor* turned his ship to engage the PAs, the two ships executed a standard crossover maneuver, passing over the heavy cruiser at warp 15 and initiating their "turn-to-target" while simultaneously beginning warp braking. However, an apparent miscalculation by the *Arashi* helmsman in programming the maneuver caused the two ships to make contact at the moment of subspace termination. The *Arashi*'s starboard "Skade" engine struck the portside primary hull of *Eiger*. The impact, combined with the ships' velocity, overloaded the primary force field and deflector systems and tore away a large section of *Eiger*'s primary hull. Twelve of her crew were killed. The *Arashi* was destroyed approximately 2.6 seconds later when her collapsed warp unit caused an antimatter containment rupture; she carried a crew of 63. The *Eiger* suffered additional structural damage from the explosion.

The *Talence* (PA 1062) and *Thrace* (PA 1064) exceeded velocity maneuvering records while on Fleet trials with the heavy cruiser *Alkaid* (CH 1829) in April 2290. The ships regularly outscored the heavy cruiser, rendering her offensive capability ineffective during multiple engagements.

During the Primmin's Hunt Exercise of August 2290 (commanded by Admiral Joseph Primmin, Special Operations, TacFleet), the *Acerra* (PA 1049), *Jico* (PA 1057), and *Armavir* (PA 1059) were tracked into separate areas of operation by three individual task force units. Their orders were to avoid their respective group of "hunters" (each consisting of one heavy cruiser and one fast frigate) while remaining within their assigned areas of space. After six days of attempts only the *Acerra* had been located by her assigned search task force. The PAs had been instructed to utilize all of the elements at their disposal, including their speed, maneuverability, cloaking systems, and overall stealth characteristics.

**Nomenclature:** All of the perimeter action ships in the *Arbiter* sub-class have names that begin with the letter 'A,' 'J,' or 'T.' PA 1050 was originally named *Atende*; was renamed *Juist* on 11 April 2285. PA 1069 was originally named *Jenk*; was renamed *Archer* on 21 April 2285.

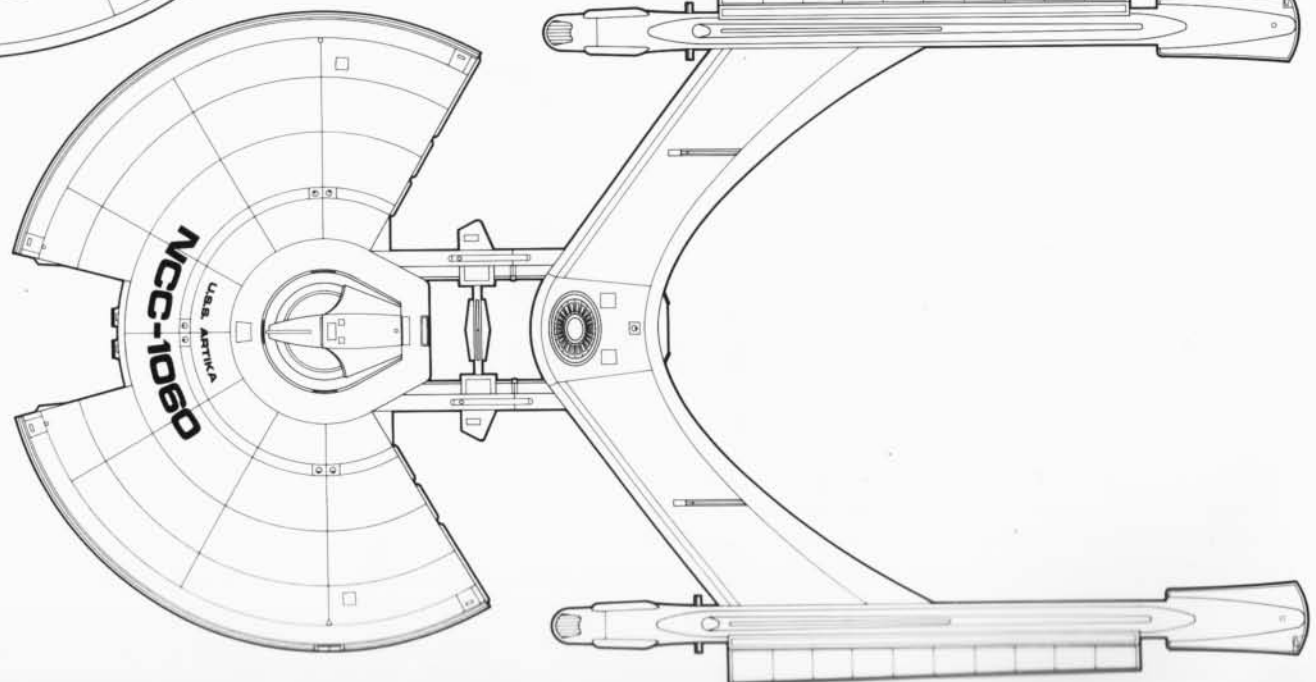


**U.S.S. SUR CHA** (CS 2541)  
Belknap Class

## SIZE DIFFERENTIAL

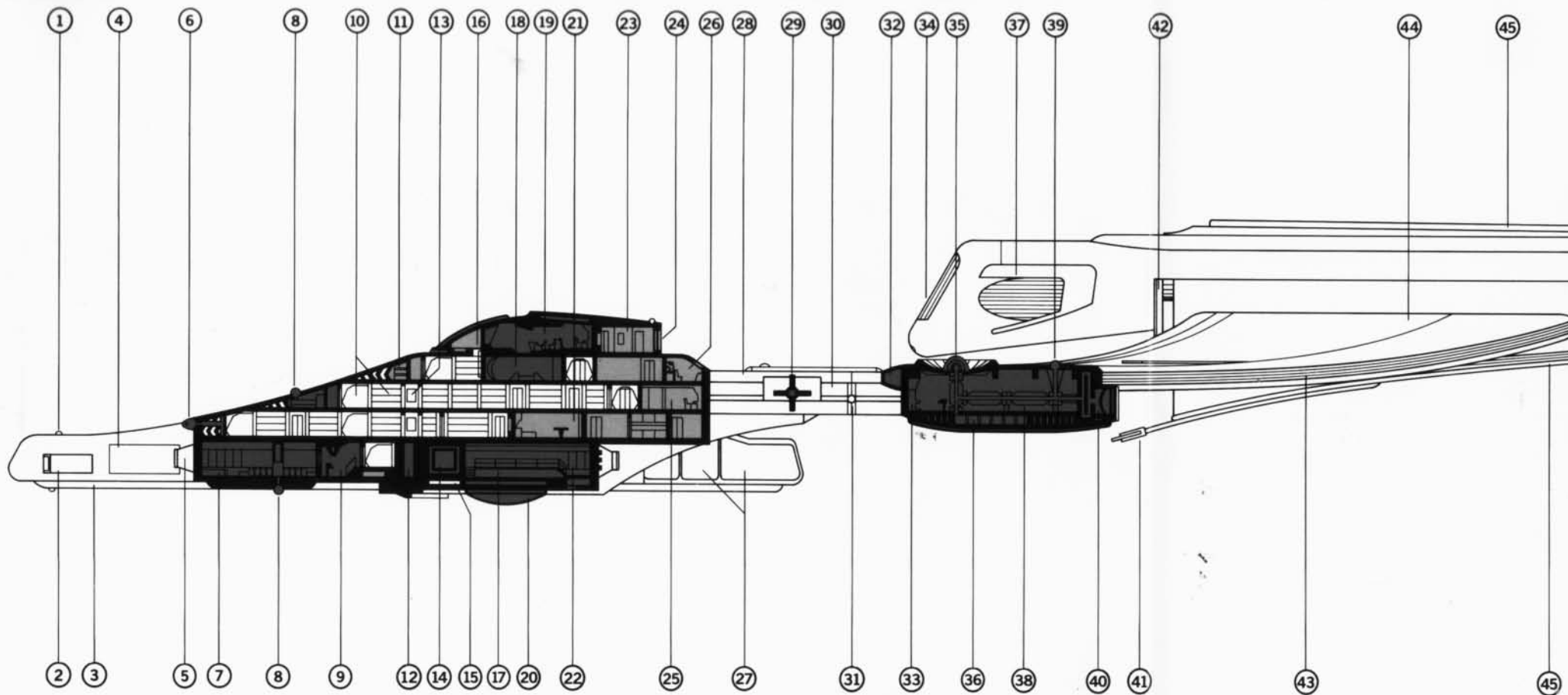
SCALE 1:1270

**U.S.S. ARTIKA** (PA 1060)  
Akyazi Class



1. Trentis reaction control system 2. RIM-12C phaser banks 3. impulse deflection crystal 4. RSL impulse engines 5. QASR maneuvering thrusters 6. sensor emplacement 7. RSM-14B phaser bank 8. LN-68 Mod 1 warp drive units





## ARBITER GROUP

Class One - Mk XXV

### INBOARD PROFILE CUTAWAY

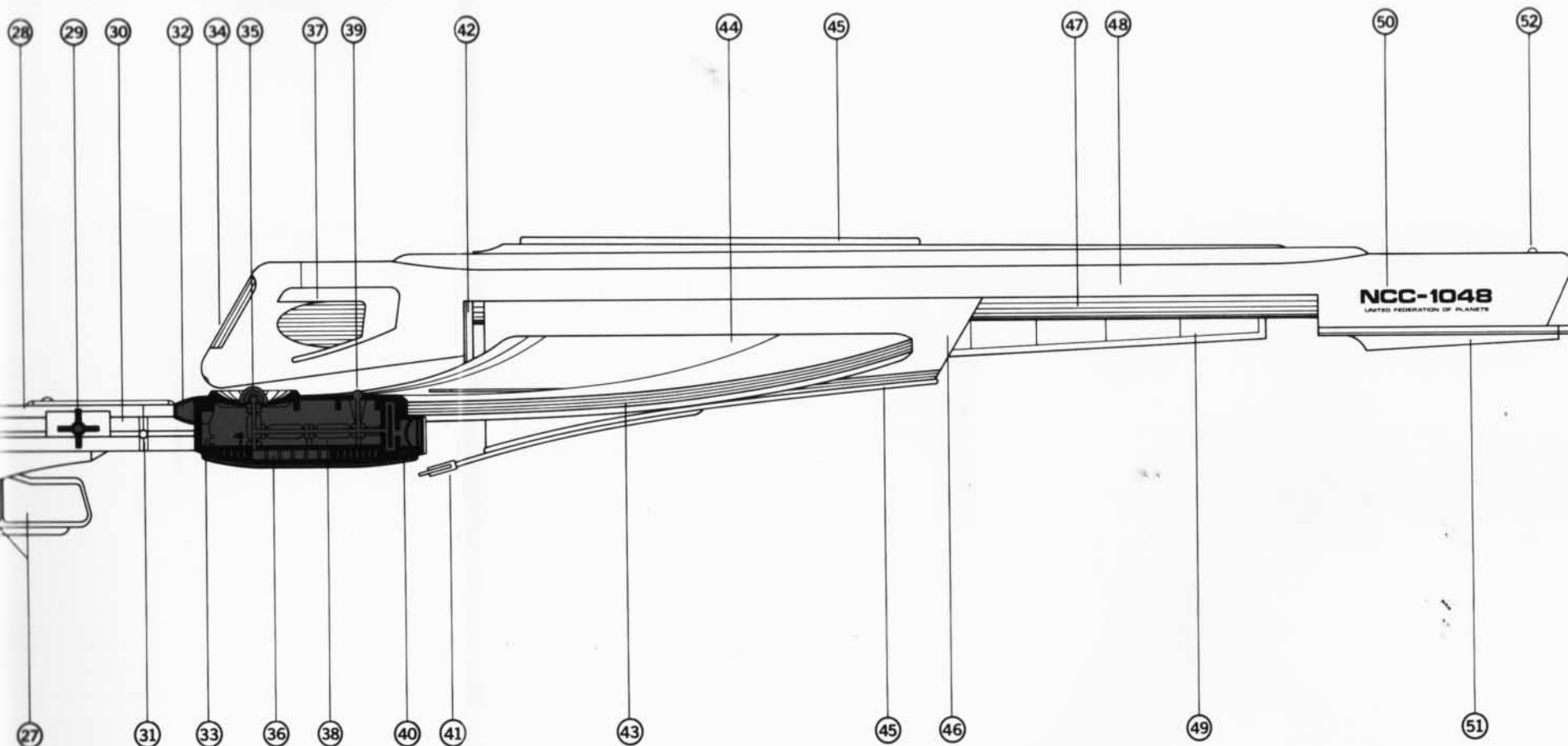
#### SECTIONAL KEY

- OPERATIONAL AREA
- SUPPORT AREA
- CORRIDOR/PASSAGEWAY

Scale 1:570

#### COMPONENT KEY

- |                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| 1. BOW LIGHT                            | 19. BRIDGE                              |
| 2. QASR MANEUVERING THRUSTER            | 20. EFIRO PRIMARY SENSOR ARRAY          |
| 3. SENSOR PLATFORM                      | 21. SICKBAY                             |
| 4. PHOTON TORPEDO FLASH SHIELDS         | 22. MK 20 TEVIOT TORPEDO TUBE (AFT)     |
| 5. MK 20 TEVIOT TORPEDO TUBE (FORWARD)  | 23. DECK 1 DOCKING AREA                 |
| 6. OCHU II DEFLECTOR ARRAY              | 24. DECK 1 DOCKING PORT                 |
| 7. PROBE LAUNCH                         | 25. SECURITY SECTION                    |
| 8. JAKA-2 PHASER BANK                   | 26. VIEWING LOUNGE                      |
| 9. FORWARD TORPEDO CONTROL              | 27. SENSOR PALLETS                      |
| 10. CORRIDOR                            | 28. PROPULSION SECTION SUPPORT PYLON    |
| 11. SHIP'S BATTERY POWER                | 29. IULUS PROTECTIVE ENVELOPE GENERATOR |
| 12. WEAPONS COMPUTER CORE               | 30. PYLON TRANSFER TUBE                 |
| 13. COMPUTER CORE ACCESS                | 31. EXPLOSIVE BOLT SEPARATION           |
| 14. PHOTON TORPEDO CONTAINMENT CHAMBER  | 32. EMERGENCY FLUSH INTAKE MACHINERY    |
| 15. CONTAINMENT CHAMBER EMERGENCY EJECT | 33. ENGINEERING COMPUTER                |
| 16. LADDERWAY TO DECK 2                 | 34. ACQUISITION VANES                   |
| 17. CENTERLINE TORPEDO CATWALK          | 35. IMPULSE AMPLIFICATION CRYSTAL       |
| 18. TACTICAL SITUATION ROOM             | 36. ANTIMATTER CONTAINMENT              |

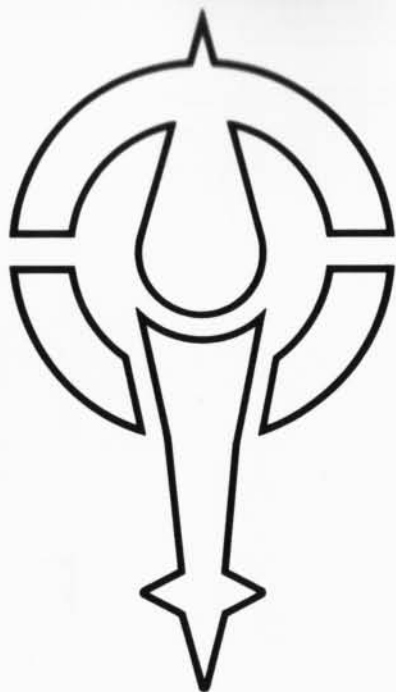


## T KEY

ING THRUSTER  
M  
O FLASH SHIELDS  
RPEDO TUBE (FORWARD)  
OR ARRAY  
ANK  
DO CONTROL  
OWER  
UTER CORE  
ACCESS  
O CONTAINMENT CHAMBER  
HAMBER EMERGENCY EJECT  
DECK 2  
PEDO CATWALK  
ION ROOM

19. BRIDGE
20. EFIRO PRIMARY SENSOR ARRAY
21. SICKBAY
22. MK 20 TEVIOT TORPEDO TUBE (AFT)
23. DECK 1 DOCKING AREA
24. DECK 1 DOCKING PORT
25. SECURITY SECTION
26. VIEWING LOUNGE
27. SENSOR PALLETS
28. PROPULSION SECTION SUPPORT PYLON
29. IULUS PROTECTIVE ENVELOPE GENERATOR
30. PYLON TRANSFER TUBE
31. EXPLOSIVE BOLT SEPARATION
32. EMERGENCY FLUSH INTAKE MACHINERY
33. ENGINEERING COMPUTER
34. ACQUISITION VANES
35. IMPULSE AMPLIFICATION CRYSTAL
36. ANTIMATTER CONTAINMENT

37. FIRST STAGE CONSTRICTION
38. MATTER/ANTIMATTER PROPULSION SHAFT
39. JAKA-5 PHASER BANK
40. CME IMPULSE ENGINE
41. DEFLECTOR SPIRE
42. PRIMARY FLOW SENSOR
43. EMERGENCY FLUSH VENTS
44. WARP ENGINE SUPPORT PYLON
45. SENSOR EMPLACEMENT
46. DEFLECTOR SPIRE DISSIPATION ASSEMBLY
47. WARP FIELD GENERATOR ASSEMBLY
48. LN-91 MOD 1 WARP DRIVE UNIT
49. WARP FIELD REFLECTOR
50. VESSEL IDENTIFICATION
51. INTERCOOLER ASSEMBLY
52. FORMATION LIGHT

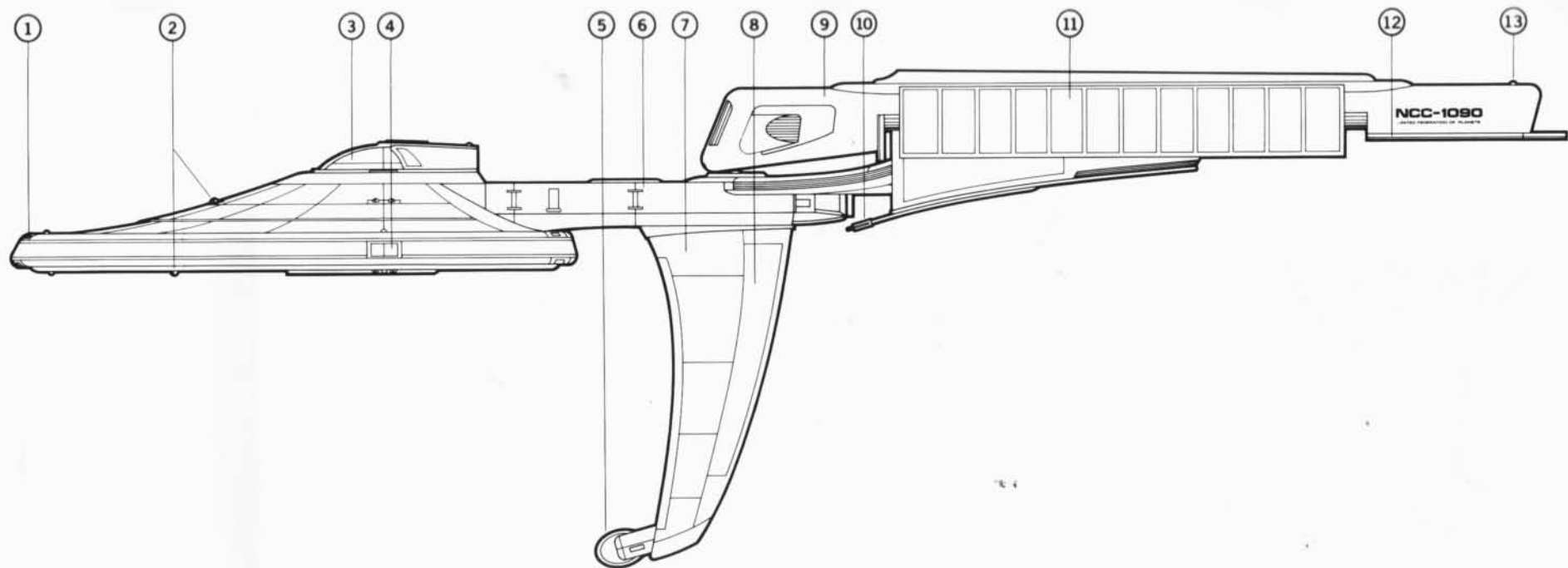


# AKULA

## Group Perimeter Action Ships

### 8 + 17 PERIMETER ACTION SHIPS: "AKYAZI/AKULA" CLASS

| Number   | Name            | Builder                                                           | Laid Down    | Launched    | Commissioned | Status     |
|----------|-----------------|-------------------------------------------------------------------|--------------|-------------|--------------|------------|
| NCC-1090 | <i>Akula</i>    | Terran Rockwell (Spacecraft Division), Pedersen Spaceport, Earth  | 30 May 2286  | 24 Aug 2287 | 03 Mar 2288  | ATAC       |
| NCC-1091 | <i>Kitkun</i>   | Terran Rockwell (Spacecraft Division), Pedersen, Spaceport, Earth | 22 Sept 2286 | 29 Nov 2287 | 18 June 2288 | ATAC       |
| NCC-1092 | <i>Athy</i>     | Vickers Shipbuilding Group Ltd., Arcadia Lake, Mars               | SD 8225.40   | SD 8261.75  | SD 8290.38   | ATAC       |
| NCC-1093 | <i>Arvika</i>   | Axaanivus Celesco Starcraft, Bedi Plains, Alpha Centauri V        | SD 7993.42   |             |              | Building   |
| NCC-1094 | <i>Kuril</i>    | Terran Rockwell (Spacecraft Division), Pedersen Spaceport, Earth  | 15 Nov 2288  |             |              | Building   |
| NCC-1095 | <i>Atami</i>    | Avondale Group, Ferrata Docks, Rigellum, Rigel II                 | SD 8155.06   |             |              | Building   |
| NCC-1096 | <i>Saros</i>    | Vickers Shipbuilding Group Ltd., Arcadia Lake, Mars               | SD 8384.52   | SD 8421.19  | SD 8437.05   | ATAC       |
| NCC-1097 | <i>Avaricum</i> | Vickers Shipbuilding Group Ltd., Arcadia Lake, Mars               | SD 8617.70   |             |              | Building   |
| NCC-1098 | <i>Sjoto</i>    | Axaanivus Celesco Starcraft, Bedi Plains, Alpha Centauri V        | SD 7697.83   | SD 7739.24  |              | Building   |
| NCC-1099 | <i>Sandusky</i> | Vickers Shipbuilding Group Ltd., Arcadia Lake, Mars               | SD 8305.93   | SD 8352.71  | SD 8369.36   | ATAC       |
| NCC-1100 | <i>Kern</i>     | Terran Rockwell (Spacecraft Division), Pedersen Spaceport, Earth  | 12 Nov 2287  | 05 Jan 2289 | 14 July 2289 | ATAC       |
| NCC-1101 | <i>Atyra</i>    | Axaanivus Celesco Starcraft, Bedi Plains, Alpha Centauri V        | SD 8000.57   |             |              | Building   |
| NCC-1102 | <i>Sybaris</i>  | Terran Rockwell (Spacecraft Division), Pedersen Spaceport, Earth  | 28 Mar 2287  | 15 May 2288 | 23 Nov 2288  | ATAC       |
| NCC-1103 | <i>Kuei</i>     | Terran Rockwell (Spacecraft Division), Pedersen Spaceport, Earth  | 27 Oct 2289  |             |              | Building   |
| NCC-1104 | <i>Krka</i>     | Terran Rockwell (Spacecraft Division), Pedersen Spaceport, Earth  | 29 Apr 2287  | 03 May 2288 | 16 Sept 2288 | ATAC       |
| NCC-1105 | <i>Akuri</i>    | Avondale Group, Ferrata Docks, Rigellum, Rigel II                 | SD 8071.60   |             |              | Building   |
| NCC-1106 | <i>Shirante</i> | Avondale Group, Ferrata Docks, Rigellum, Rigel II                 | SD 8254.38   |             |              | Building   |
| NCC-1107 | <i>Samakov</i>  | Vickers Shipbuilding Group Ltd., Arcadia Lake, Mars               | SD 8639.31   |             |              | Building   |
| NCC-1108 | <i>Sitka</i>    | Axaanivus Celesco Starcraft, Bedi Plains, Alpha Centauri V        | SD 7963.80   |             |              | Building   |
| NCC-1109 | <i>Ajanta</i>   | Avondale Group, Ferrata Docks, Rigellum, Rigel II                 |              |             |              | Authorized |
| NCC-1110 | <i>Kalinin</i>  | Avondale Group, Ferrata Docks, Rigellum, Rigel II                 |              |             |              | Authorized |
| NCC-1111 | <i>Kutaisi</i>  | Terran Rockwell (Spacecraft Division), Pedersen Spaceport, Earth  | 03 Dec 2289  |             |              | Building   |
| NCC-1112 | <i>Sangamon</i> | Axaanivus Celesco Starcraft, Bedi Plains, Alpha Centauri V        |              |             |              | Authorized |
| NCC-1113 | <i>Kelkit</i>   | Vickers Shipbuilding Group Ltd., Arcadia Lake, Mars               |              |             |              | Authorized |
| NCC-1114 | <i>Anaiza</i>   | Avondale Group, Ferrata Docks, Rigellum, Rigel II                 |              |             |              | Authorized |



### Akula

1. Shilka reaction control system 2. JAKA-2 phaser banks 3. bridge 4. gangway hatch 5. Bia deflector pod 6. propulsion section support pylons 7. deflector pod support pylons 8. deflector pod dissipation vanes 9. LN-94 Mod 1 warp drive units 10. deflector spires 11. warp field reflector 12. intercooler assembly 13. formation light

The ships of the *Akula* sub-class comprise the final construction group of the *Akyazi*-class perimeter action ships. This sub-class is also the smallest - it will consist of 25 vessels when construction is completed. The *Akula* ships are (or will be) assigned to high-threat areas because of their enhanced defensive capabilities. PA 1109, 1110, and 1112-14 have been authorized but have not yet begun building.

*Class:* Although all 105 *Akyazi* class ships were authorized at the same time (02 August 2283), three individual sub-classes were envisioned from the outset, and the *Akula* design was last due to the extensive testing and evaluation necessary on the "Bia" deflector pod assembly. The "Bia" unit contributes heavily to the visually distinctive *Akula* design, creating an almost unmistakable sensor signature and recognition profile. Star Fleet officially ordered the *Akula* sub-class nine months after ordering the *Arbiter* group (and 17 days before the *Arbiter* [PA 1048] was laid down).

16 May 2284/Stardate 8321.4 -

Temerand installs LN-94 warp units on Prototype No. 11 at the Symmons T. Bodio dockyard complex. Warp engine activation tests will be conducted over the next three weeks, with the ship scheduled to leave the dockyard facility under its own power on 09 June.

July 2284 -

Refinements to the *Akula* prototype configuration are necessary after poor results following warp field stability tests with the "Kratos" engines. Modifications include

reconfiguration of the internal flux chillers, expansion of the intake vents, and new alignments for the support pylon propulsion shafts.

October 2284 -

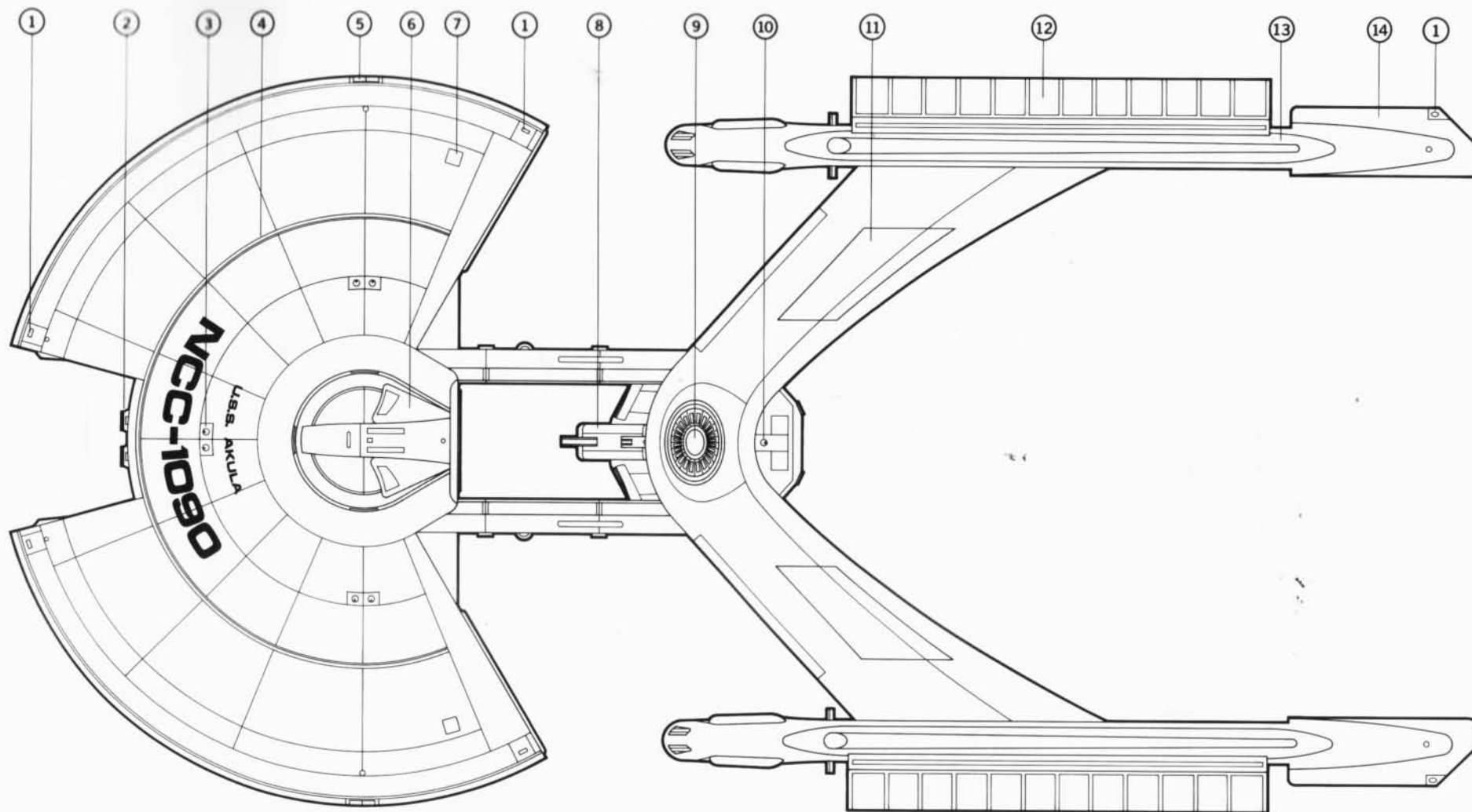
Prototype No. 6 is shifted to the *Akula* test program after Star Fleet concludes weapons evaluations on the "Teviot" torpedo and JAKA phaser systems in the *Arbiter* operational mode. The "Bia" deflector unit and a support pylon assembly will be fitted to evaluate the "Bia" MDS system and the Flocon-designed Tuch compact phaser mounts. Tests with the system installed in Prototype No. 11 have resulted in an overloading of the Tuch phaser system whenever the deflector unit successfully absorbs and dissipates a significant amount of offensive energy.

16-19 February 2285 -

Prototype No. 11 performs flawlessly under the direction of Lieutenant Commander Sori Descanta and the command crew that will be assigned to the *Kitkun* (PA 1091) when that ship is completed. The prototype was put through a series of complicated maneuvers, readiness inspections, and war games exercises during the four-day Admiralty Inspection event at Starbase 20. Eight vessels participated, with the prototype garnering a second-place scoring finish overall (surpassed by only the *Engage* [PA 1125]).

June 2285 -

Prototype No. 5 shifts to the *Akula* test program. She will perform the majority of



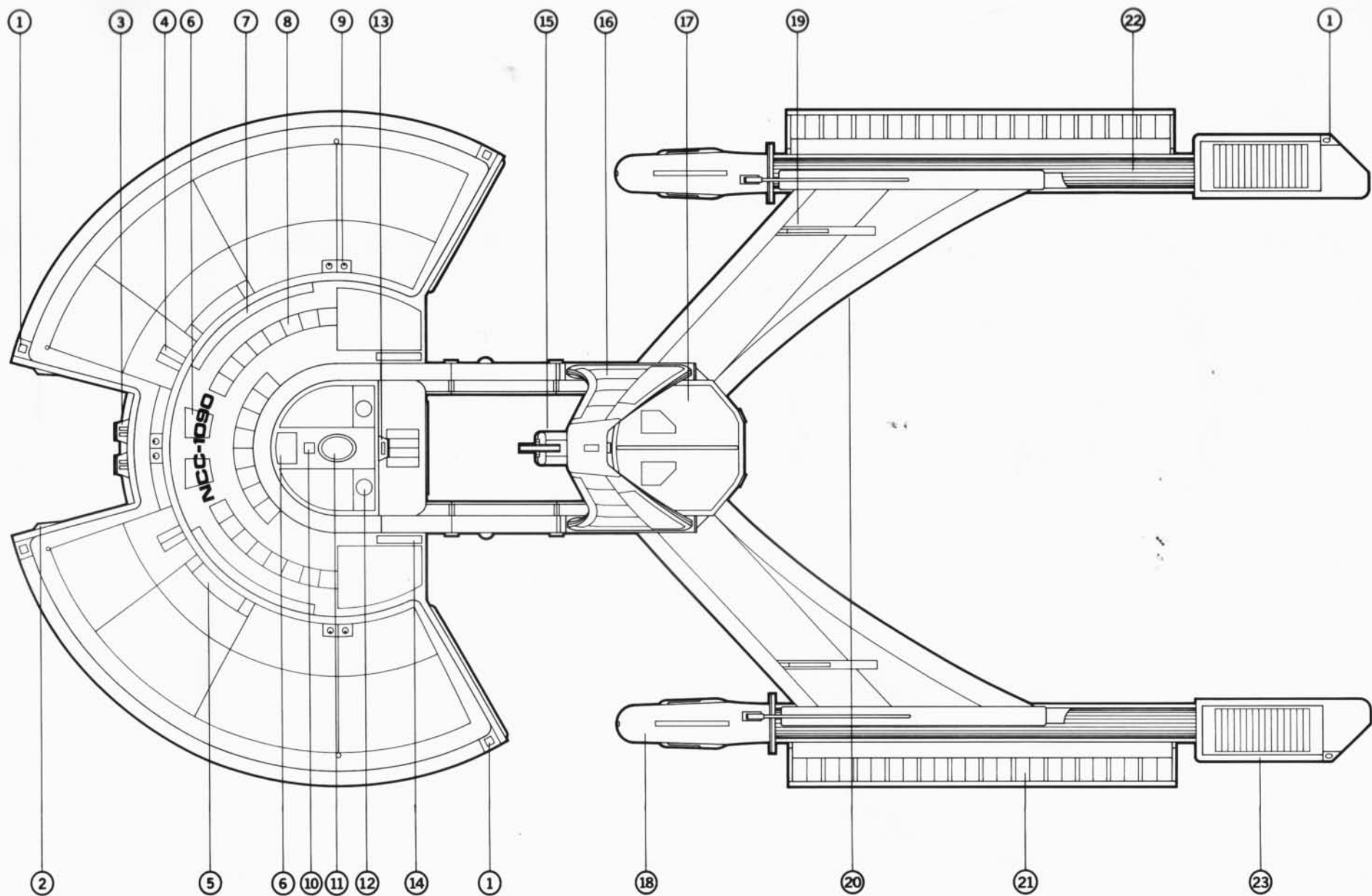
### Akula

1. Shilka reaction control system 2. Mk 5 Komati torpedo tubes 3. JAKA-2 phaser banks 4. sensor emplacement 5. gangway hatch 6. bridge magnetic drive units 7. personnel hatch 8. Bia deflector pod 9. impulse amplification crystal 10. JAKA-5 phaser bank 11. emergency flush vents 12. warp field reflector 13. LN-94 Mod 1 warp drive units 14. intercooler assembly

testing and evaluation on a "B" version of the *Akula* design after it is announced by Star Fleet that Axanivus Celesco and Avondale Group will construct 11 ships closer in configuration to the *Akyazi/Arbiter* design. These ships will be equipped with the "Skade" LN-91 warp units of the *Arbiter* group and will have the "Kenelex" reaction control system in place of the newer "Shilka" units. Most of the other primary operating systems, however, will remain the same. Long-range manufacturing proposals submitted by the two primary contractors indicate that the less-sophisticated "B" variants will have lower procurement costs, while requiring less construction time and smaller reserve parts stockpiles. A subsequent review of the proposal by TacFleet finds that performance characteristics will be reduced by less than 8%.

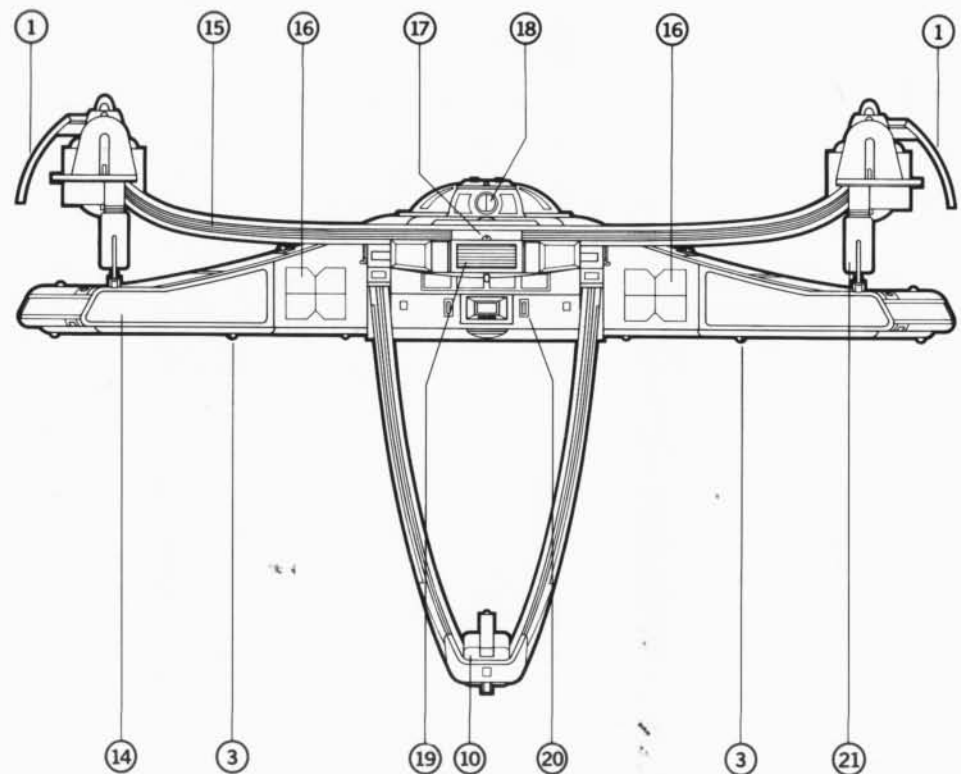
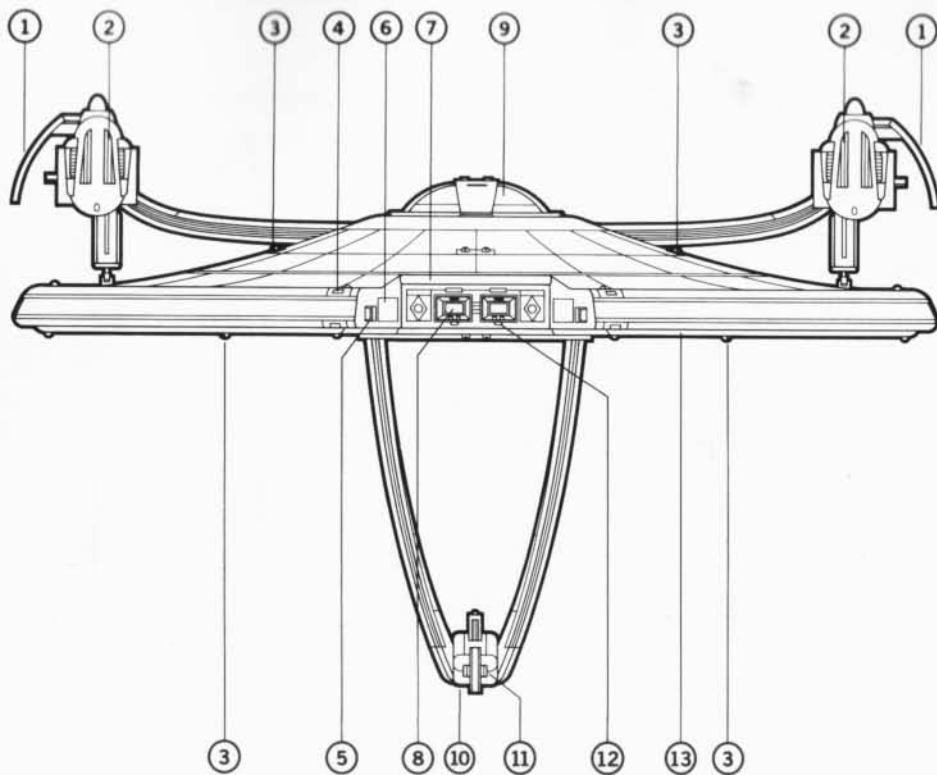
All operational design characteristics regarding the "Bia" deflector unit and its support pylon assembly are finalized as Prototype No. 6 ends its *Akula* design weapons evaluation phase. The initial tests on the different shape of the *Akula* design, including the deflector pod assembly, revealed that warp field formation and warp handling characteristics were negatively affected because the deflector unit was positioned too near the main body of the ship. As a result, the support pylons were lengthened (and the deflector pod lowered), thereby improving the warp geometry of the design. An additional bonus of this modification is that incoming enemy fire (which is absorbed and dissipated by the deflector pod) remains a greater distance from the primary hull.





### Akula

1. Shilka reaction control system 2. QASR maneuvering thrusters 3. Mk 5 Komati torpedo tubes 4. workbee bay doors 5. intelligence drone launch covers 6. photon torpedo containment chamber eject 7. secondary power core emergency jettison 8. lifeboat emplacements 9. JAKA-2 phaser banks 10. tractor beam 11. Dugoyne primary sensor array 12. turbolift jettison 13. Mk 9 Boris torpedo tube 14. ASL emergency impulse engine fuel dump 15. Bia deflector pod 16. deflector pod support pylons 17. engineering pod 18. LN-94 Mod 1 warp drive units 19. sensor emplacements 20. emergency flush vents 21. warp field reflector 22. warp field generator assembly 23. intercooler assembly



### Akula

1. warp field reflector 2. acquisition vanes 3. JAKA-2 phaser banks 4. Shilka reaction control system 5. QASR maneuvering thrusters 6. photon torpedo flash shields 7. Tyme-Wilcox deflector array 8. Mk 5 Komati torpedo tubes 9. bridge 10. Bia deflector pod 11. Tuch phaser bank covers 12. probe launch tubes 13. sensor platform 14. sensor pallet 15. emergency flush vents 16. ASL emergency impulse engines 17. JAKA-5 phaser bank 18. bridge docking port 19. CME impulse engine 20. photon exhaust ports 21. sensor emplacement

7 July 2285 -

Star Fleet places the order for 25 ships of the *Akula* design, bringing the total number of *Akyazi*-class perimeter action ships to 105 (as authorized by the Military Staff Committee on 02 August 2283).

September 2285 -

TacFleet deployment requirements for the *Akula* sub-class necessitate the inclusion of numerous back-up systems and many redundant subsystems in the ships' design. The *Akulas* will be assigned to volatile areas of Federation space where the PA/adversary ratio will be inordinately high.

Prototype No. 7, which was shifted to the *Akula* program in August, will be the full-systems prototype for the *Akula* design; Prototype No. 5 will serve the same function for the "B" variant.

November 2285 -

A standard periodic examination reveals microscopic stress fractures and mild fatigue at certain points along the propulsion package support pylon assembly of

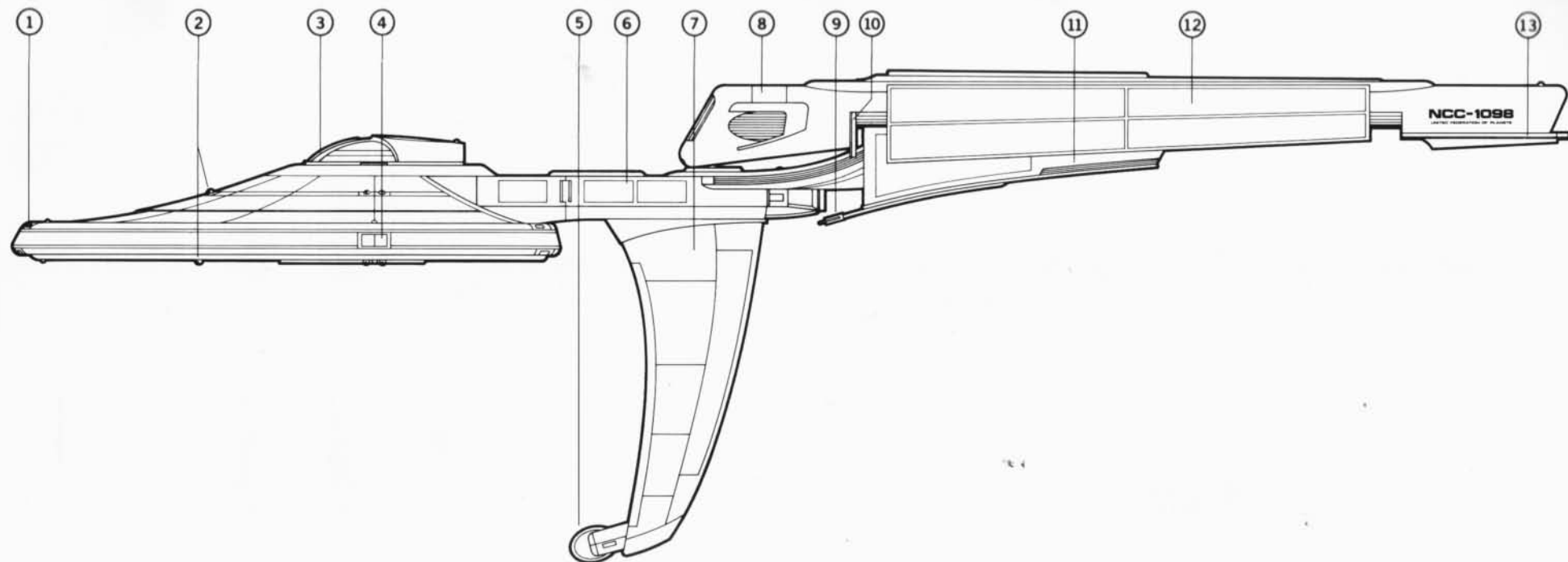
Prototype No. 11. The cause is determined to be the different warp geometries created by the inclusion of the "Bia" deflector unit and its pylon assembly in the *Akula* design. The increased distance from the primary hull to the engineering pod and the corresponding increase in length of the propulsion pylons is also a factor. The other ships in the prototype fleet will be examined and a program implemented to redesign the structural reinforcement features of the propulsion support pylon assembly.

11 December 2285 -

The first ship of the *Akyazi* class, the U.S.S. *Bucke* (PA 1020), is launched at Earth.

March 2286 -

Several TacFleet officials announce they are displeased with the velocity limitations of the basic *Akula* design. Feasibility studies conducted early in the *Akula* program indicated that the ships' probable "battle maximum" would be in the vicinity of warp 20, making them comparable to the *Akyazi* and *Arbiter* sub-classes in that regard. However, the entirely different warp characteristics of the *Akula* design (the inclusion of the deflector pod assembly resulting in a bisecting of the warp field along the Z-axis)



### Sjöto

1. Kenelex reaction control system 2. JAKA-2 phaser banks 3. bridge deflector shield enhancement 4. gangway hatch 5. Bia deflector pod 6. propulsion section support pylons 7. deflector pod support pylons 8. LN-91 Mod 1 warp drive units 9. deflector spire 10. primary flow sensor 11. deflector spire dissipation assembly 12. warp field reflector 13. intercooler assembly

limit the ships' velocity capabilities more than originally anticipated. TacFleet later states that it is "satisfied with the combination of the enhanced defensive capabilities of the *Akulas* and their attainable maximum velocity" of warp 18.5 (see *Weapons*).

April 2286 -

Star Fleet directs that additional crew safeguards be added to the *Akula* design, including the addition of a shuttle/escape craft in the Avondale-built ships. Also, the three-person lifeboats in the primary hull of the *Akulas* will have improved "sleeper" qualities.

30 May 2286 -

Work begins on the *Akula* (PA 1090) at Terran Rockwell's Pedersen Spaceport, Earth.

**Classification:** The *Akula* sub-class was ordered as the final construction group of the *Akyazi*-class perimeter action ships, displaying multiple design differences due to Star Fleet deployment requirements. This sub-class includes hull numbers 1090 through 1114, inclusive.

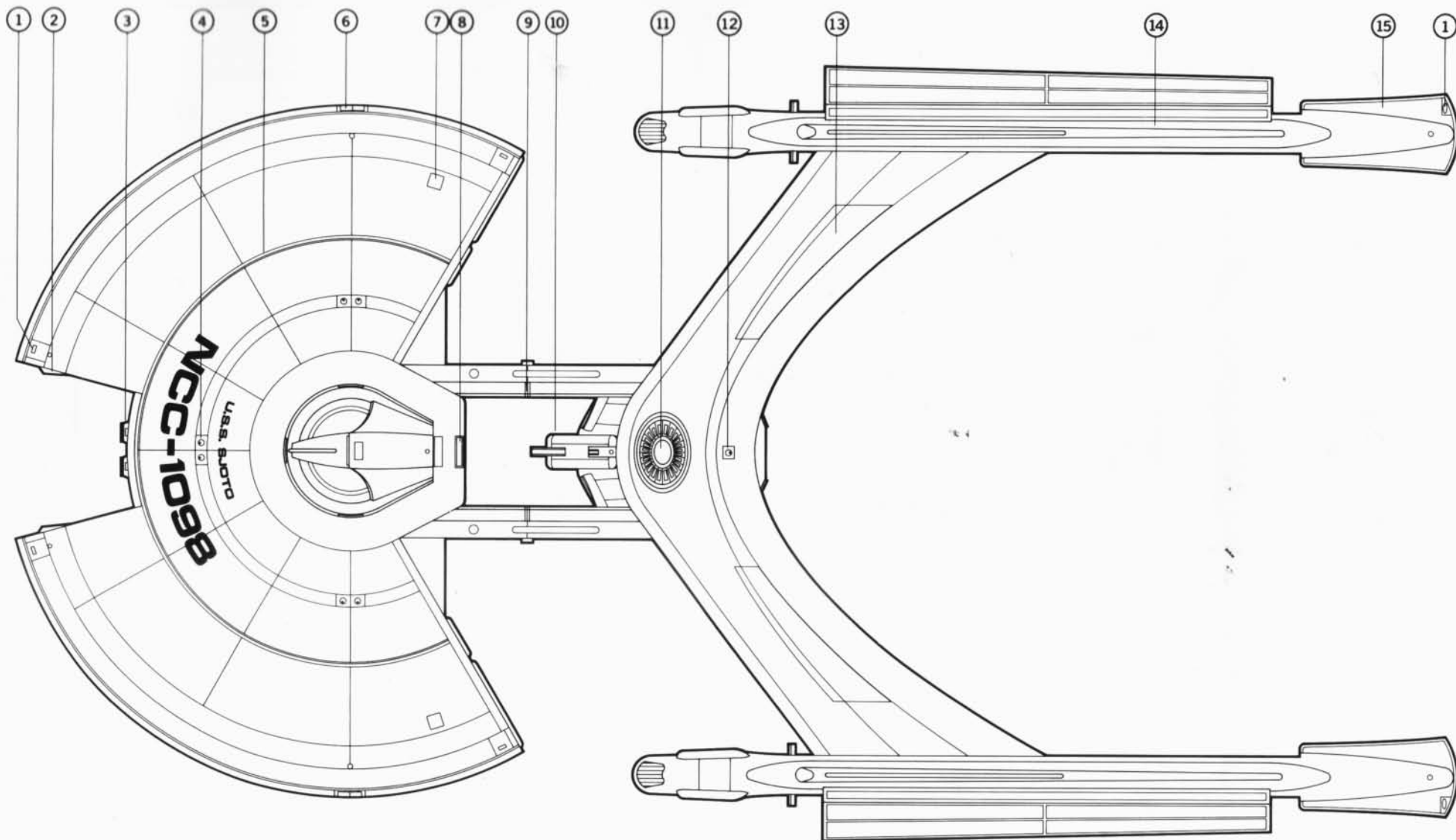
**Design:** The ships of the *Akula* sub-class will be assigned to high-threat areas of Federation space. They carry additional defensive systems and more powerful weaponry than their earlier sister ships, enabling them to better fulfill their deployment requirements. The *Akula* (PA 1090) was the first ship launched, and within three weeks of her first deployment (17 May 2288) she had already engaged and defeated

Orion fast attack craft in the vicinity of Kat II. The first of the "B" variant ships, the *Sjöto* (PA 1098), will be commissioned in June of 2290.

As in all *Akyazi* class ships, the *Akulas* possess no "viewing ports" or environmental system reactors of any kind, the exception being those on deck four at the ships' lounge location. (Two small observation ports are located on deck five in the aft weapons section.) This is a safety feature necessitated by mission requirements.

The 01 level bridge of these ships was designed as a more functional lifeboat assembly than the bridge configurations of the *Akyazi* and *Arbiter* groups. The bridge assembly contains a complete thruster package as well as magnetic drive units mounted on the rear port and starboard bulkheads. (These units are similar to those mounted on Star Fleet shuttlecraft.) The internal bridge arrangement of the vessels built by Terran Rockwell differs slightly from the layout of the Vickers-built ships. The bridge configuration of the "B" variant ships (those built by Axaanivus Celesco and Avondale Group) is similar to the bridge design of the *Arbiter* sub-class, with minor variations.

All ships in the *Akula* group possess two holocom rooms, located on deck five. These facilities serve the dual purpose of improving crew morale and well-being and providing intelligence data interpretation. In non-operational situations, each holocom room can be utilized as a holographic entertainment facility, providing stress reduction and relaxation benefits for individual crew members. The mind-link provisions of the holocom facility (more advanced than Star Fleet's senceiver-type



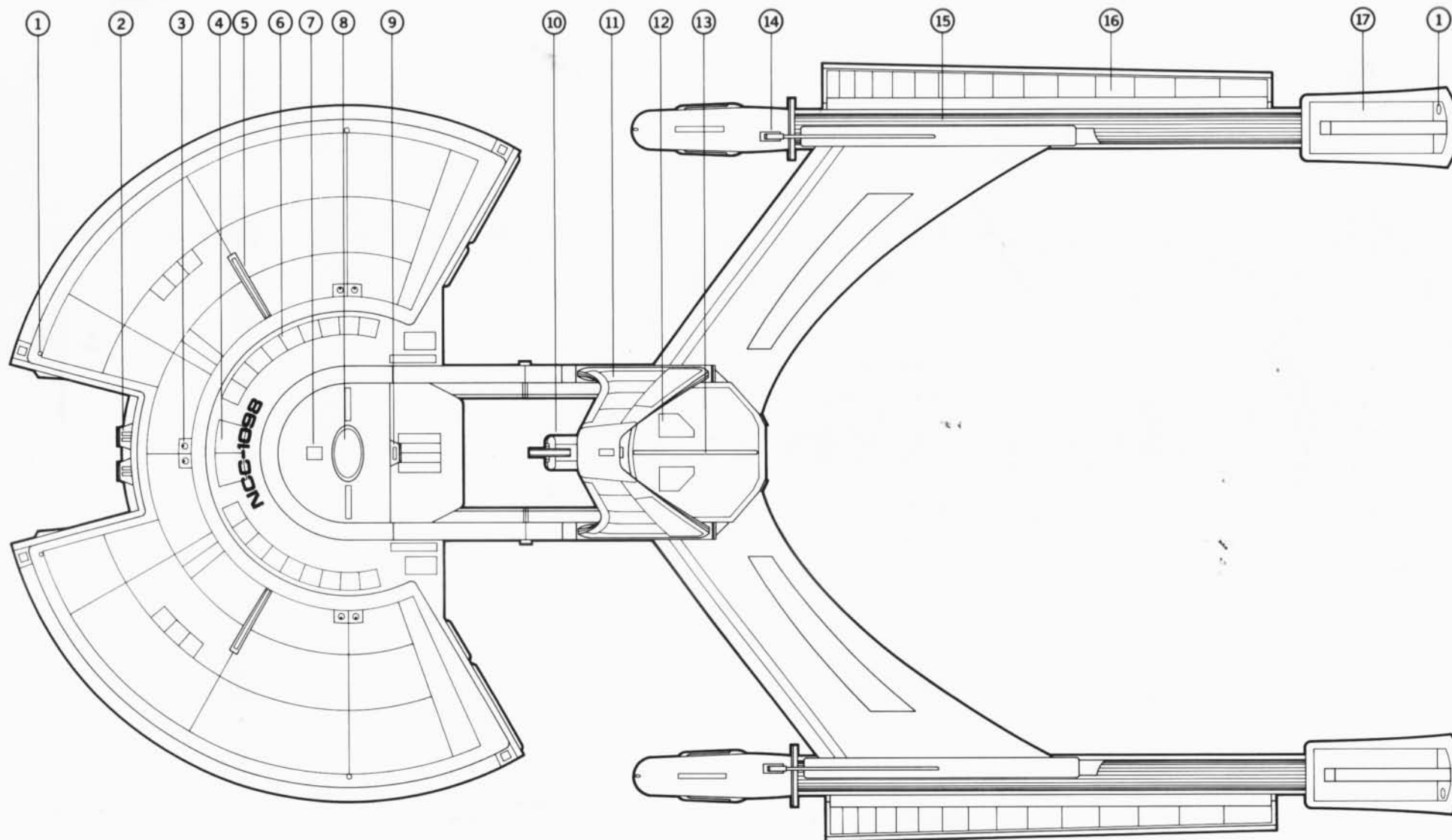
### Sjöto

1. Kenelex reaction control system 2. QASR maneuvering thrusters 3. Mk 5 Komati torpedo tubes 4. JAKA-2 phaser banks 5. sensor emplacement 6. gangway hatch 7. personnel hatch 8. lounge viewport 9. explosive bolt separation 10. Bia deflector pod 11. impulse amplification crystal 12. JAKA-5 phaser bank 13. emergency flush vents 14. LN-91 Mod 1 warp drive units 15. intercooler assembly

implants) enable crew members to experience more realistic "visualizations" of selected activities. During intelligence operations, information from intelligence drones is transmitted back to the ship and can be analyzed at this location. The holocom apparatus provides a direct link to the user's cerebral cortex, permitting detailed, first-person data analyzation and interpretation. Actual visual information from the drone is displayed within the entire area of each holocom room in two- and

three-dimensional form, allowing senior officers to interpret incoming data as well. Crew members assigned to interpret holocom images have received specialized training in raw data interpretation and mind-link techniques.

Like the ships of the *Akyazi* group, the *Akulas* are equipped with three-person lifeboats (24 units for a 72-person capacity); all are located on deck five and can be ejected from the bottom of the primary hull in the event of an emergency. (Likewise,



### Sjoto

1. bow light 2. Mk 5 Komati torpedo tubes 3. JAKA-2 phaser banks 4. intelligence drone launch covers 5. sensor emplacement 6. lifeboat emplacements 7. tractor beam 8. Lusurre primary sensor array 9. Mk 9 Boris torpedo tube 10. Bia deflector pod 11. deflector pod support pylons 12. antimatter eject covers 13. engineering pod deflector vane 14. deflector spire 15. warp field generator assembly 16. warp field reflector 17. intercooler assembly

the *Akyazi* ships carry 24 lifeboats mounted on the primary hull underside, but also have two additional units at the deck five rear location, giving them a 78-person total capacity. The *Arbiter* ships have 16 individual lifeboat units, each slightly more sophisticated and with a five-person maximum per unit.) All of these lifeboats, supplied by Vorasseur Industries, have advanced sleeper qualities and life support sufficient to sustain their occupants (in "sleep" mode) for anywhere from seven to ten

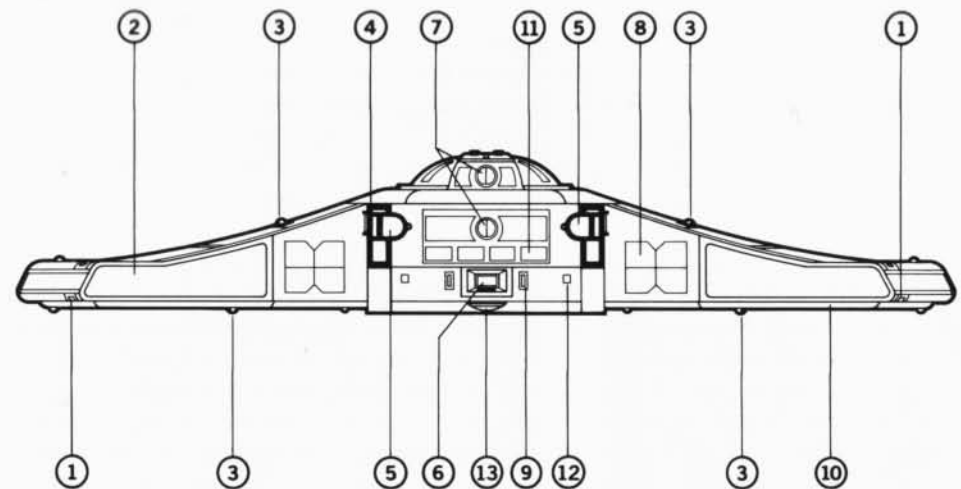
months. A homing beacon detectable by Federation vessels is emitted to aid rescue ships in locating active lifeboats. TacFleet ethic requires that all lifeboats with survivors aboard be retrieved at any cost.

The distance between the warp drive units in the *Akula* "B" design is greater than in the other ships of the sub-class due to the inclusion of the "Skade" LN-91 warp system in those vessels. Other "B" variations include subtle differences in hull forms and



# Current specifications of Akula sub-class:

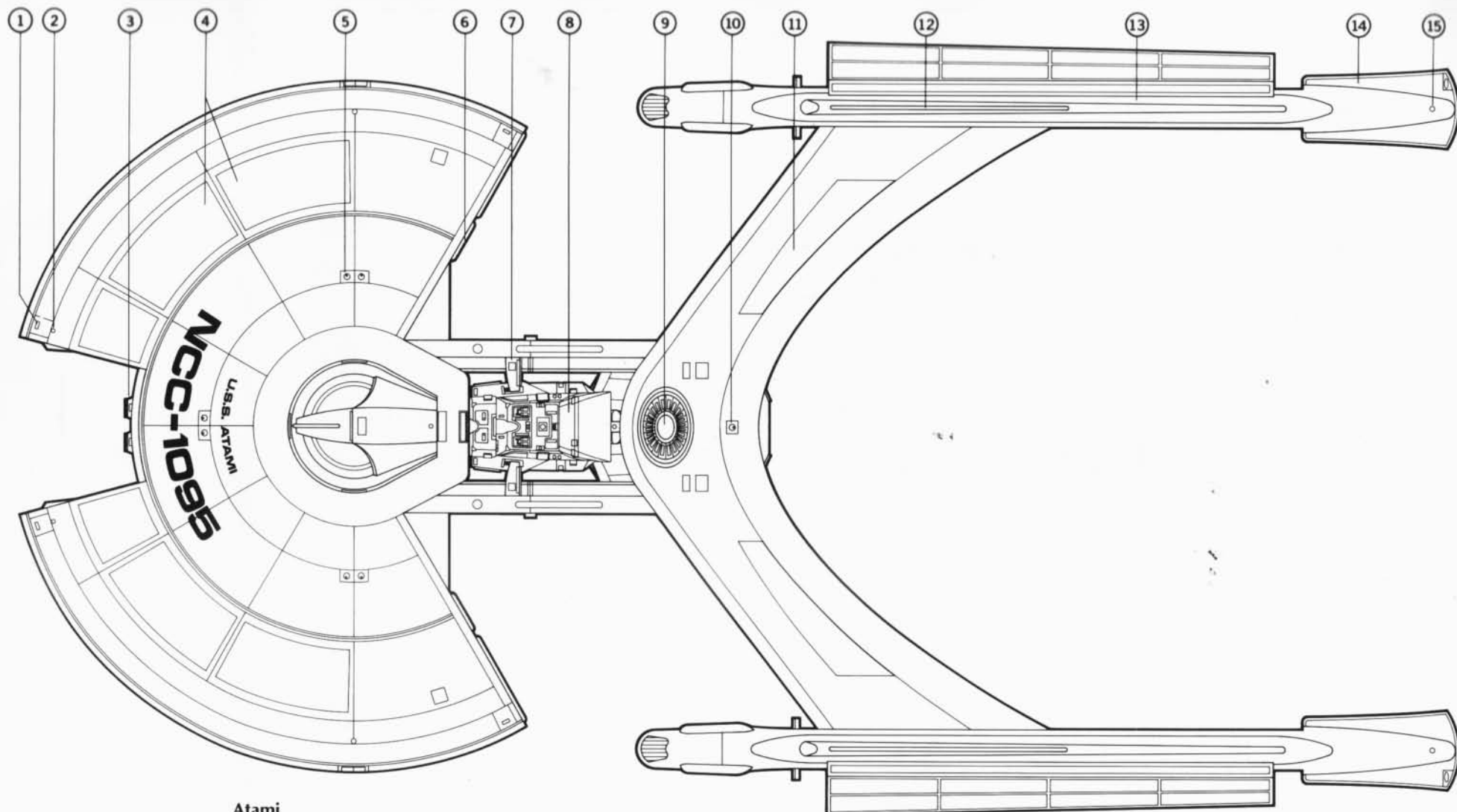
|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |          |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|
| Displacement:   | 74,500 metric tons standard<br>(72,500mt light, 75,750mt full load)<br>NCC-1093, 1095, 1098, 1101, 1105, 1106, 1108-10, 1112, 1114:<br>77,200 metric tons standard<br>(76,000mt light, 78,500mt full load)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |          |
|                 | Overall                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Primary Hull | Nacelles |
| Length:         | 215.5m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 78.9m        | 119.1m   |
| Beam:           | 108.0m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 107.6m       | 14.7m    |
| Draft:          | 68.7m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 18.4m        | 13.8m    |
|                 | NCC-1093, 1095, 1098, 1101, 1105, 1106, 1108-10, 1112, 1114:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |          |
| Length:         | 222.4m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 78.9m        | 126.7m   |
| Beam:           | 119.9m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 107.6m       | 16.2m    |
| Draft:          | 70.4m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 18.4m        | 13.8m    |
| Propulsion:     | Two (2) "Kratos" LN-94 Mod 1 dilithium-energized antimatter linear warp drive units<br>(System contractor: Vickers Engineering Group Ltd., Cumbria, Earth)<br>NCC-1093, 1095, 1098, 1101, 1105, 1106, 1108-10, 1112, 1114:<br>Two (2) "Skade" LN-91 Mod 1 dilithium-energized antimatter linear warp drive units<br>(System contractor: Vickers Engineering Group Ltd., Cumbria, Earth)<br>One (1) "Delum" CME-A subatomic unified energy impulse unit<br>(System contractor: Orage Ijek, Aksajak, Andor)<br>Two (2) ASL-5A emergency impulse thrust units<br>QASR enhanced particle beam maneuvering thrusters<br>(Systems contractor: Scarbak Propulsion Systems, Cairo, Earth)<br>"Shilka" pulsed laser reaction control system<br>(System contractor: Vickers Engineering Group Ltd., Cumbria, Earth)<br>NCC-1093, 1095, 1098, 1101, 1105, 1106, 1108-10, 1112, 1114:<br>"Kenelex" pulsed laser reaction control system<br>(System contractor: Orage Ijek, Aksajak, Andor) |              |          |
| Velocity:       | Warp 8, standard<br>Warp 12, maximum<br>Warp 18.5, battle maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |          |
| Acceleration:   | Rest-Onset Critical Momentum: 2.27 sec<br>Onset Critical Momentum-Warp Engage: .93 sec<br>Warp 1-Warp 4: .28 sec<br>Warp 4-Warp 8: .19 sec<br>Warp 8-Warp 12: 1.05 sec<br>Warp 12-Warp 18.5: 2.36 sec                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |          |
| Duration:       | 2 Earth years, standard<br>3 Earth years, maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |          |
| Complement:     | 75 (7 officers + 68 crew)<br>NCC-1093, 1095, 1098, 1101, 1105, 1106, 1108-10, 1112, 1114:<br>81 (7 officers + 74 crew)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |          |
| Embarked craft: | None<br>NCC-1095, 1105, 1106, 1109, 1110, 1114: 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |          |
| Navigation:     | "Owl's Eye" Warp Celestial Guidance<br>(System contractor: Valdemar NCS Inc., Copenhagen, Earth)<br>"Perim" Duotronic IV; "Okios Atur" Logic Subsystem<br>(Systems contractor: Kuchata Pratus Ikyla, Arrasta, Daran V)<br>NCC-1093, 1095, 1098, 1101, 1105, 1106, 1108-10, 1112, 1114:<br>"Perim" Duotronic IV<br>(System contractor: Kuchata Pratus Ikyla, Arrasta, Daran V)<br>Datatac Support Subsystem<br>(System contractor: Farranti Mnemonics, Berkshire, Earth)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |          |
| Computers:      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |          |



**Akula** (cross-section at pylon bolt #1, frame 209)

1. Kenelex reaction control system 2. sensor pallets 3. JAKA-2 phaser banks 4. structural bulkheads 5. pylon transfer tube 6. Mk 9 Boris torpedo tube 7. docking ports 8. ASL emergency impulse engines 9. photon exhaust 10. sensor platform 11. lounge viewports 12. viewports 13. Dugoyne primary sensor array

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Phasers:          | 6 banks of 2 each - JAKA-2 independent twin mount<br>1 bank - JAKA-5 single mount<br>(Systems contractor: Asakaze Ordnance Systems Ltd., Honshu-Hamamatsu, Earth)<br>2 banks - Tuch ISC compact single mount<br>(System contractor: Flocon Fleet Defense Systems, Great Lakes, Earth)                                                                                                                                                                   |
| Photon torpedoes: | 2 tubes - Mk 5 "Komati" independent<br>1 tube - Mk 9 "Boris" independent<br>(Systems contractor: Arvan Toy Conglessum, Binz, Tellar)                                                                                                                                                                                                                                                                                                                    |
| Defense:          | "Merlin II" primary force field and deflector control system<br>"Zelus" cloaking generation and stasis countermeasure system<br>(Systems contractor: Prentice-Schafer Inc., Marsport, Mars)<br>"Nike" weapon system (enhanced)<br>TAVITAC Tactical Subsystem<br>(Systems contractor: Keindoffer-Klaatsen DSC, Munich, Earth)<br>"Podi Aschura" deflector spires<br>"Bia" MDS deflector pod<br>(Systems contractor: Kal Achal Conglessum, Takuv, Tellar) |
| Life support:     | MCH1 Modular Gravity and Atmosphere Maintenance Unit<br>(System contractor: Cristobal SM/S, Manila, Earth)<br>ARU/SI radiation protection systems<br>(System contractor: Kym Lan Den Terra, New Kyoto, Earth)<br>"Lenix-B" waste regeneration systems<br>(System contractor: Jullundur-Lahore Ltd., Bombay, Earth)                                                                                                                                      |



#### Atami

1. Kenelex reaction control system 2. QASR maneuvering thrusters 3. Mk 5 Komati torpedo tubes 4. deflector enhancement grids 5. JAKA-2 phaser banks 6. sensor pallets 7. docking contact points 8. Mk K (special) warp shuttle 9. impulse amplification crystal 10. JAKA-5 phaser bank 11. emergency flush vents 12. sensor emplacement 13. LN-91 Mod 1 warp drive units 14. intercooler assembly 15. formation light



#### STAR FLEET STANDARD SHUTTLE

LENGTH: 13.8M CAPACITY: 6 + 2 CREW  
BEAM: 7.8M MAXIMUM  
DRAFT: 3.5M VELOCITY: SUBLIGHT



#### STAR FLEET LONG-RANGE SHUTTLE

LENGTH: 18.7M CAPACITY: 14 + 4 CREW  
BEAM: 11.1M MAXIMUM  
DRAFT: 4.4M VELOCITY: SUBLIGHT



#### STAR FLEET WARP SHUTTLE MK K (SPECIAL)

LENGTH: 22.8M CAPACITY: 26 + 3 CREW  
BEAM: 14.2M MAXIMUM  
DRAFT: 5.4M VELOCITY: WARP 2

different dimension figures (see "Specifications" section), as well as the change in bridge configuration mentioned earlier. Additionally, the Avondale-built "B" vessels have deflector enhancement grids on their primary hull topsides and they embark a single, limited-warp escape craft for emergency situations (mounted between the propulsion package support pylons and docked at the deck three docking port location). With minor in-flight modifications this escape craft can be utilized as a limited-duty shuttlecraft in planetfall and other situations.

**Engineering:** The "Kratos" LN-94 warp units are fitted in most of these ships (the "Skade" units in the "B" variants). The warp reflectors on the "Kratos" engines are curved, increasing their efficiency at capturing the warp field and reflecting it between each engine. Also, as in all *Akyazi* class ships, the warp reflector assemblies act as defensive "shields" for the warp units, protecting them from enemy fire.

The CME-A impulse units are fitted in all ships of the *Akula* sub-class. They are a modification of the CME system in the *Arbiter* group. The ASL-5A emergency impulse system was specifically modified from the basic ASL configuration to operate effectively with the *Akula* design. In the event of propulsion system loss or failure, the units can be fired continuously for approximately 240 hours.

Power for both the deflector spires and the "Bia" deflector pod in these ships is provided by the warp engines. (The deflector spires in the *Akyazi* and *Arbiter* sub-classes also draw power directly from the warp drive system.) In the event of warp unit failure, the CME-A impulse system can provide limited power to the deflector pod, while the spires can be supplied by the secondary power core located on deck five.

**Weapons:** The *Akulas* mount the JAKA-2 and JAKA-5 phaser systems; all ships (including the "B" variants) are fitted with seven banks (13 emplacements). The Tuch compact phaser system is fitted within the deflector pod assembly - one bank on either side of the deflector unit's generating disk. These units are concealed and are generally used in situations where a tactical advantage is desired.

A retractable phaser system for the *Akula* sub-class was considered early in the design phase. However, the system's development was delayed and it was eventually

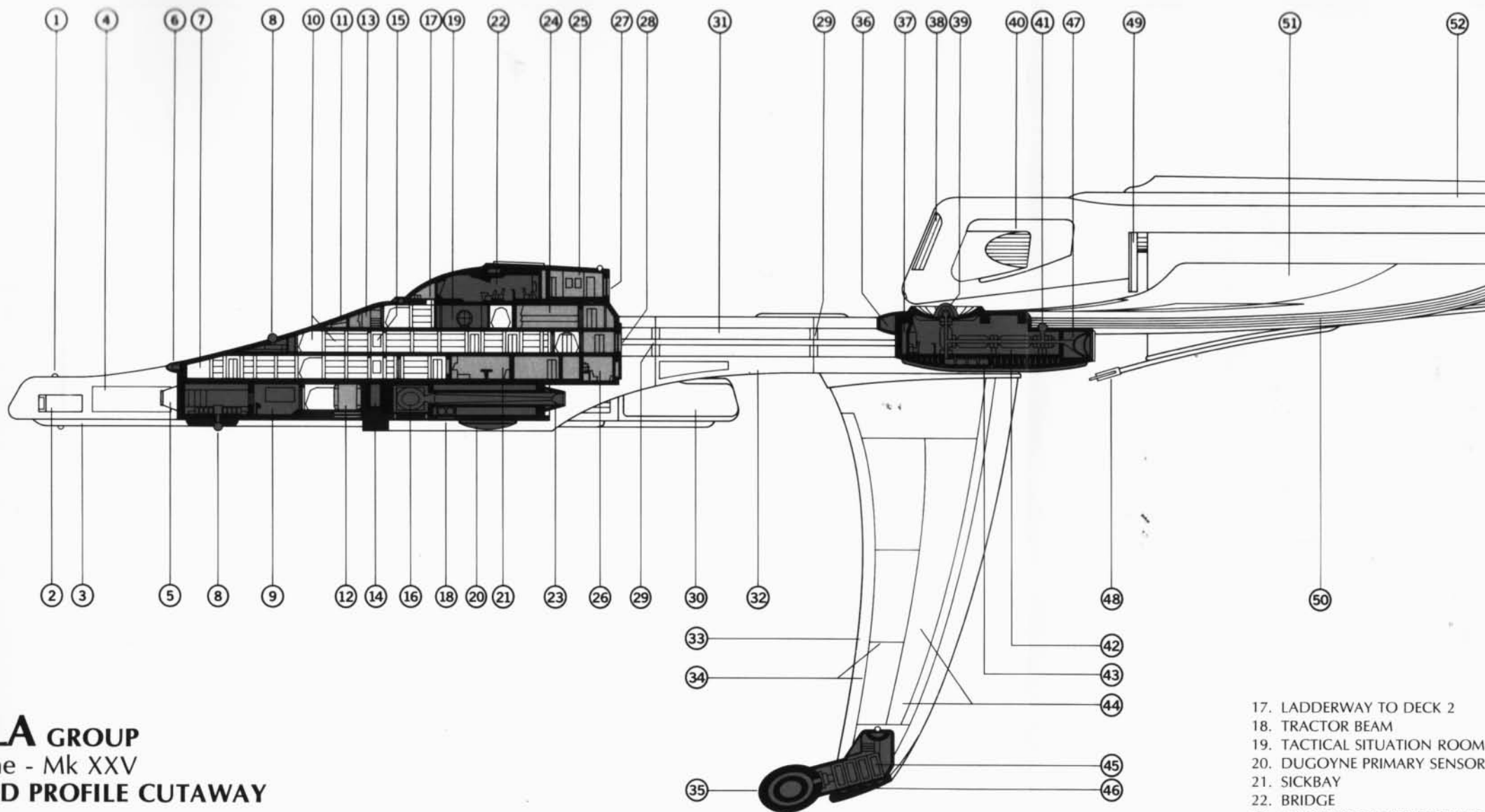
considered impractical based on PA mission requirements.

The photon torpedo suite is identical to the configuration in the *Akyazi* sub-class - two "Komati" Mk 5 tubes forward and one "Boris" Mk 9 tube aft. At one point, TacFleet had directed that two rear-firing tubes be incorporated into the *Akula* design to further offset the ships' lack of speed. However, the proximity of the deflector pod support pylons to the rear torpedo firing line forced the installation of the single "Boris" rear-firing unit.

The "Bia" series deflector pod operates on the same principle as the ships' deflector spires. Acting as a "lightning rod" during battle, the pod absorbs and dissipates incoming enemy fire (through a series of dissipation vanes located in its support pylon assembly), thereby lessening the strain on the ship's deflector shield system. The pod's successful "attract" rate (the percentage of incoming fire it will successfully "capture" and neutralize) is between 28% and 41%, depending on various factors. (This compares to an 18% to 22% attract rate for each "Podi Aschura" deflector spire.) The deflector pod's tolerance and overload capacities are classified. The "Bia" units have never been tested in actual combat.

**Operational:** On 04 June 2288 the *Akula* (PA 1090), operating in conjunction with the *Atago* (PA 1052), was challenged by Pryn family Orion fast attack craft at the outskirts of the Kat system. In the mistaken belief that the *Akula* was in the area to close down their latest smuggling route, the Pryn family cited the independence of the Kat system as evidence of Star Fleet's lack of jurisdiction in the area. After being informed of the request for Federation protection by the Conservator of Kat II, the three Pryn vessels ceased communication and opened fire on the *Akula*. After relaying her status to the *Atago* (which was four parsecs distant), the *Akula* quickly neutralized two of the ships by eliminating their warp drive capabilities with photon torpedo volleys directed at their main engines. The third vessel was intercepted two hours later by the *Atago*. The *Akula* suffered minor damage to her port deflector spire and aft RCS system.

**Nomenclature:** All of the perimeter action ships in the *Akula* sub-class have names that begin with the letter 'A,' 'K,' or 'S.'



# AKULA GROUP

## Class One - Mk XXV

### ONBOARD PROFILE CUTAWAY

#### SECTIONAL KEY

- OPERATIONAL AREA
- SUPPORT AREA
- CREW QUARTERS
- CORRIDOR/PASSAGEWAY

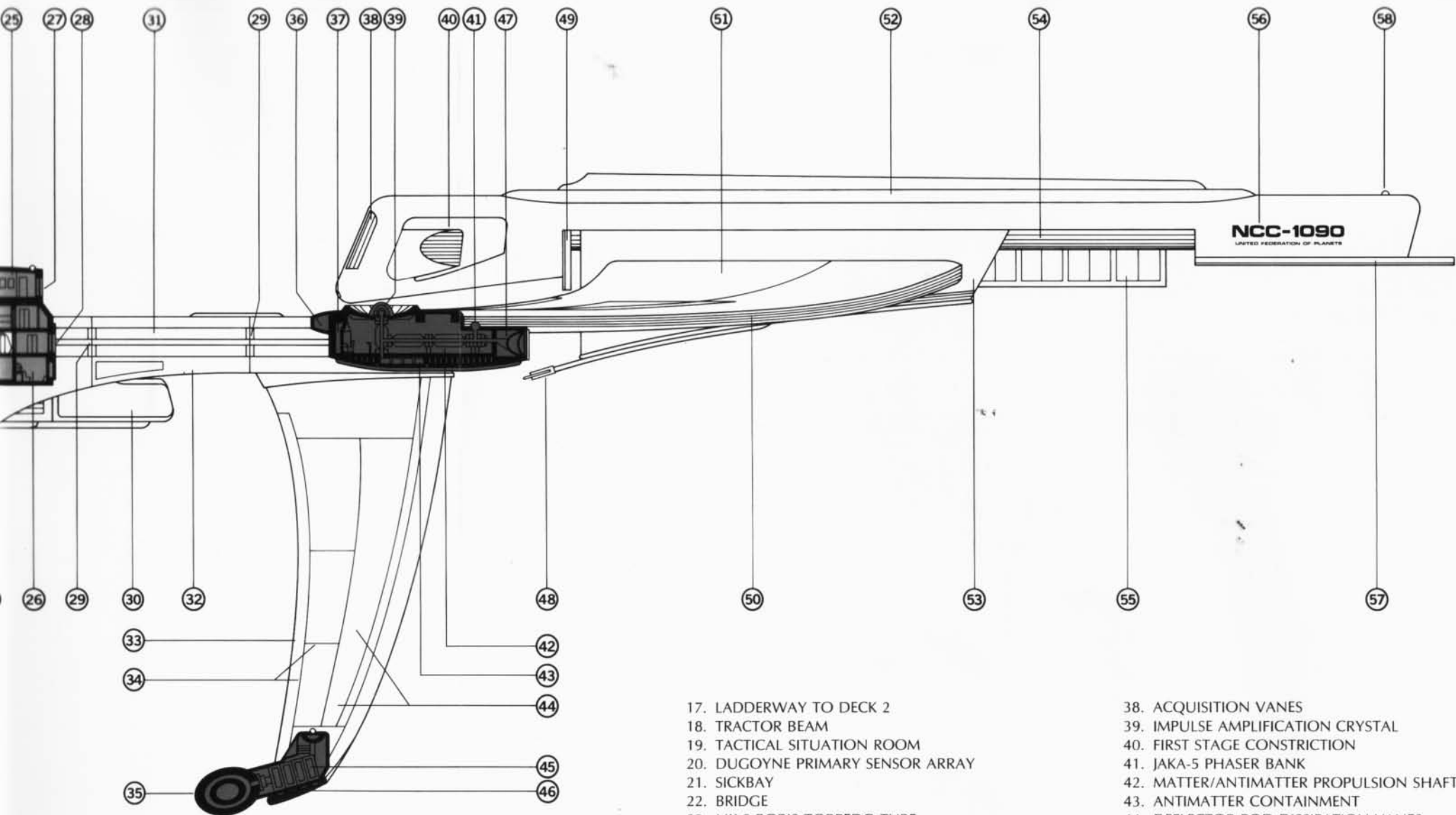
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#### COMPONENT KEY

1. BOW LIGHT
2. QASR MANEUVERING THRUSTER
3. SENSOR PLATFORM
4. PHOTON TORPEDO FLASH SHIELD
5. MK 5 KOMATI TORPEDO TUBE
6. TYME-WILCOX DEFLECTOR ARRAY
7. SERVICE CORRIDOR
8. JAKA-2 PHASER BANK

9. FORWARD TORPEDO CONTROL
10. CORRIDOR
11. SHIP'S BATTERY POWER
12. LIFEBOAT EMPLACEMENT
13. CREW QUARTERS
14. WEAPONS COMPUTER CORE
15. COMPUTER CORE ACCESS
16. PHOTON TORPEDO CONTAINMENT CHAMBER

17. LADDERWAY TO DECK 2
18. TRACTOR BEAM
19. TACTICAL SITUATION ROOM
20. DUGOYNE PRIMARY SENSOR
21. SICKBAY
22. BRIDGE
23. MK 9 BORIS TORPEDO TUBE
24. ARMORY
25. DECK 1 DOCKING AREA
26. VIEWING LOUNGE
27. DECK 1 DOCKING PORT
28. DECK 3 DOCKING PORT
29. EXPLOSIVE BOLT SEPARATION
30. SENSOR PALLETS
31. PYLON TRANSFER TUBE
32. PROPULSION SECTION SUPPORT
33. DEFLECTOR POD SUPPORT P
34. DEFLECTOR GRID
35. DEFLECTOR POD ATTRACTOR
36. EMERGENCY FLUSH INTAKE M
37. ENGINEERING COMPUTER



## KEY

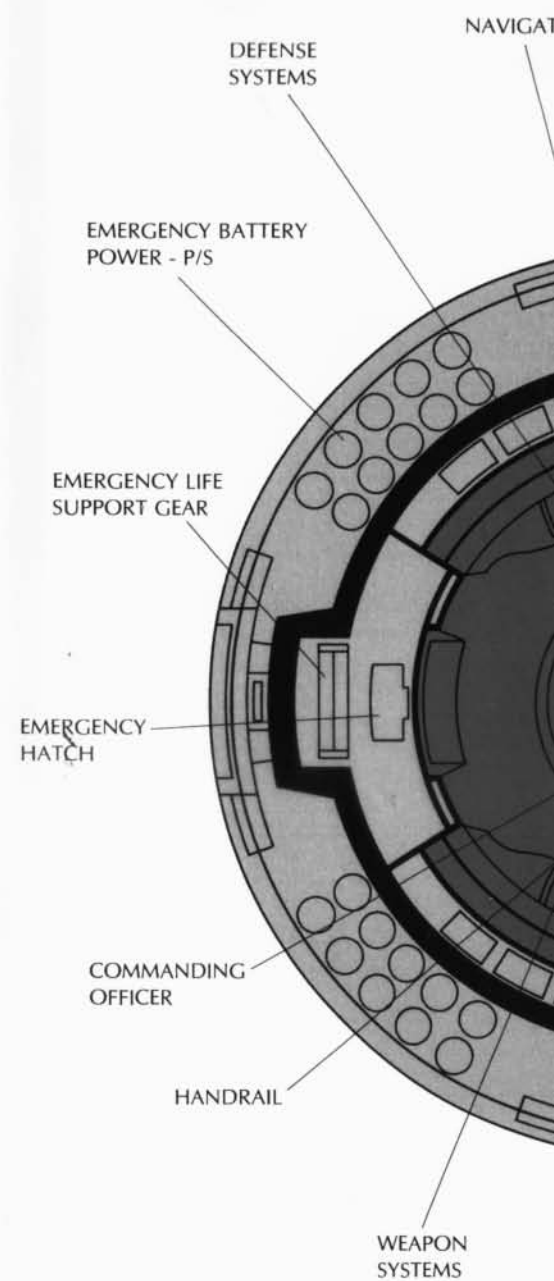
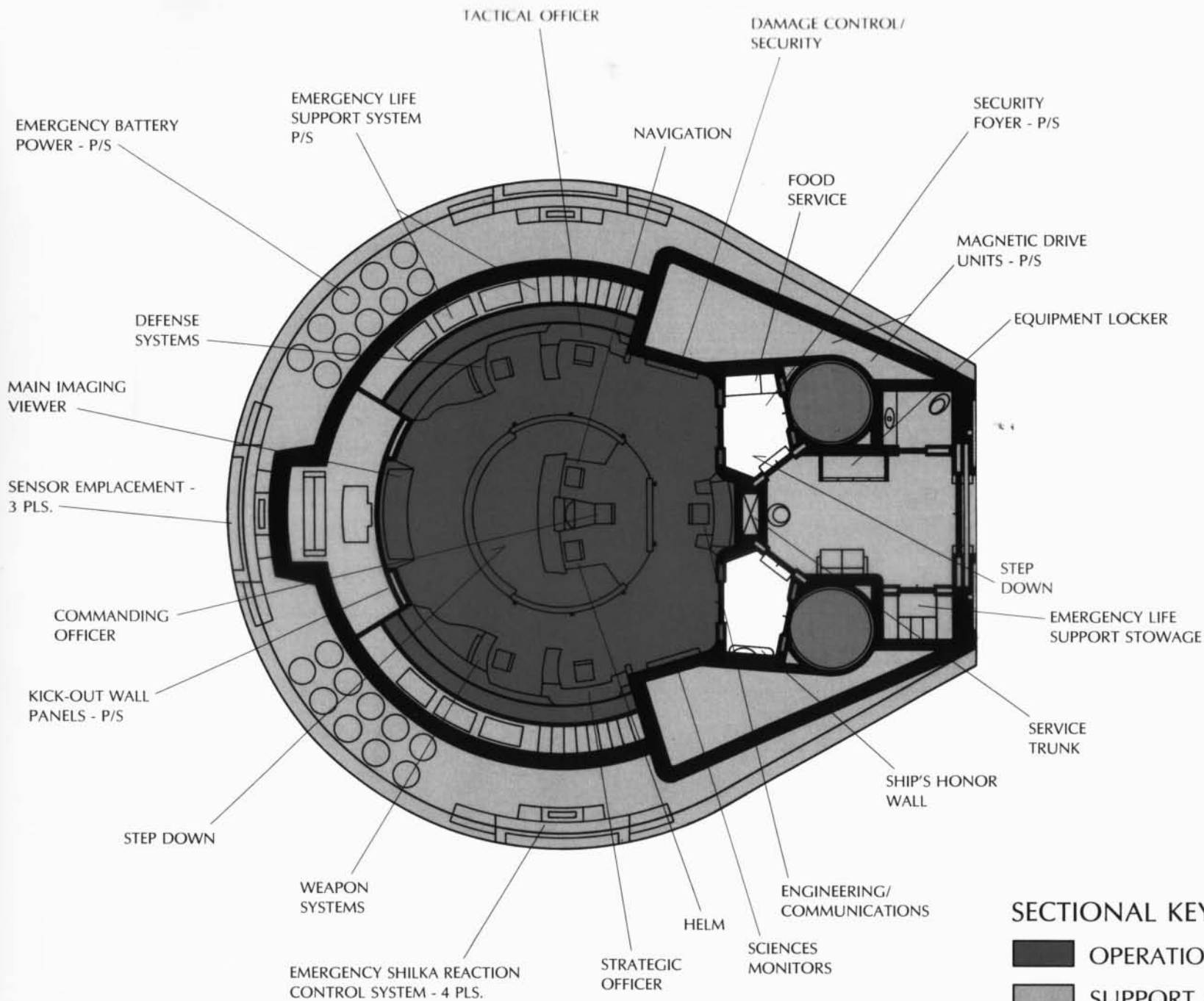
THRUSTER  
FLASH SHIELD  
DO TUBE  
CTOR ARRAY

9. FORWARD TORPEDO CONTROL
10. CORRIDOR
11. SHIP'S BATTERY POWER
12. LIFEBOAT EMPLACEMENT
13. CREW QUARTERS
14. WEAPONS COMPUTER CORE
15. COMPUTER CORE ACCESS
16. PHOTON TORPEDO CONTAINMENT CHAMBER

17. LADDERWAY TO DECK 2
18. TRACTOR BEAM
19. TACTICAL SITUATION ROOM
20. DUGOYNE PRIMARY SENSOR ARRAY
21. SICKBAY
22. BRIDGE
23. MK 9 BORIS TORPEDO TUBE
24. ARMORY
25. DECK 1 DOCKING AREA
26. VIEWING LOUNGE
27. DECK 1 DOCKING PORT
28. DECK 3 DOCKING PORT
29. EXPLOSIVE BOLT SEPARATION
30. SENSOR PALLETS
31. PYLON TRANSFER TUBE
32. PROPULSION SECTION SUPPORT PYLON
33. DEFLECTOR POD SUPPORT PYLON
34. DEFLECTOR GRID
35. DEFLECTOR POD ATTRACTOR DISK
36. EMERGENCY FLUSH INTAKE MACHINERY
37. ENGINEERING COMPUTER

38. ACQUISITION VANES
39. IMPULSE AMPLIFICATION CRYSTAL
40. FIRST STAGE CONSTRICTION
41. JAKA-5 PHASER BANK
42. MATTER/ANTIMATTER PROPULSION SHAFT
43. ANTIMATTER CONTAINMENT
44. DEFLECTOR POD DISSIPATION VANES
45. ENERGY CONVERSION CELLS
46. ENERGY DISPERSION TUBES
47. CME-A IMPULSE ENGINE
48. DEFLECTOR SPIRE
49. PRIMARY FLOW SENSOR
50. EMERGENCY FLUSH VENTS
51. WARP ENGINE SUPPORT PYLON
52. LN-94 MOD 1 WARP DRIVE UNIT
53. DEFLECTOR SPIRE DISSIPATION ASSEMBLY
54. WARP FIELD GENERATOR ASSEMBLY
55. WARP FIELD REFLECTOR
56. VESSEL IDENTIFICATION
57. INTERCOOLER ASSEMBLY
58. FORMATION LIGHT

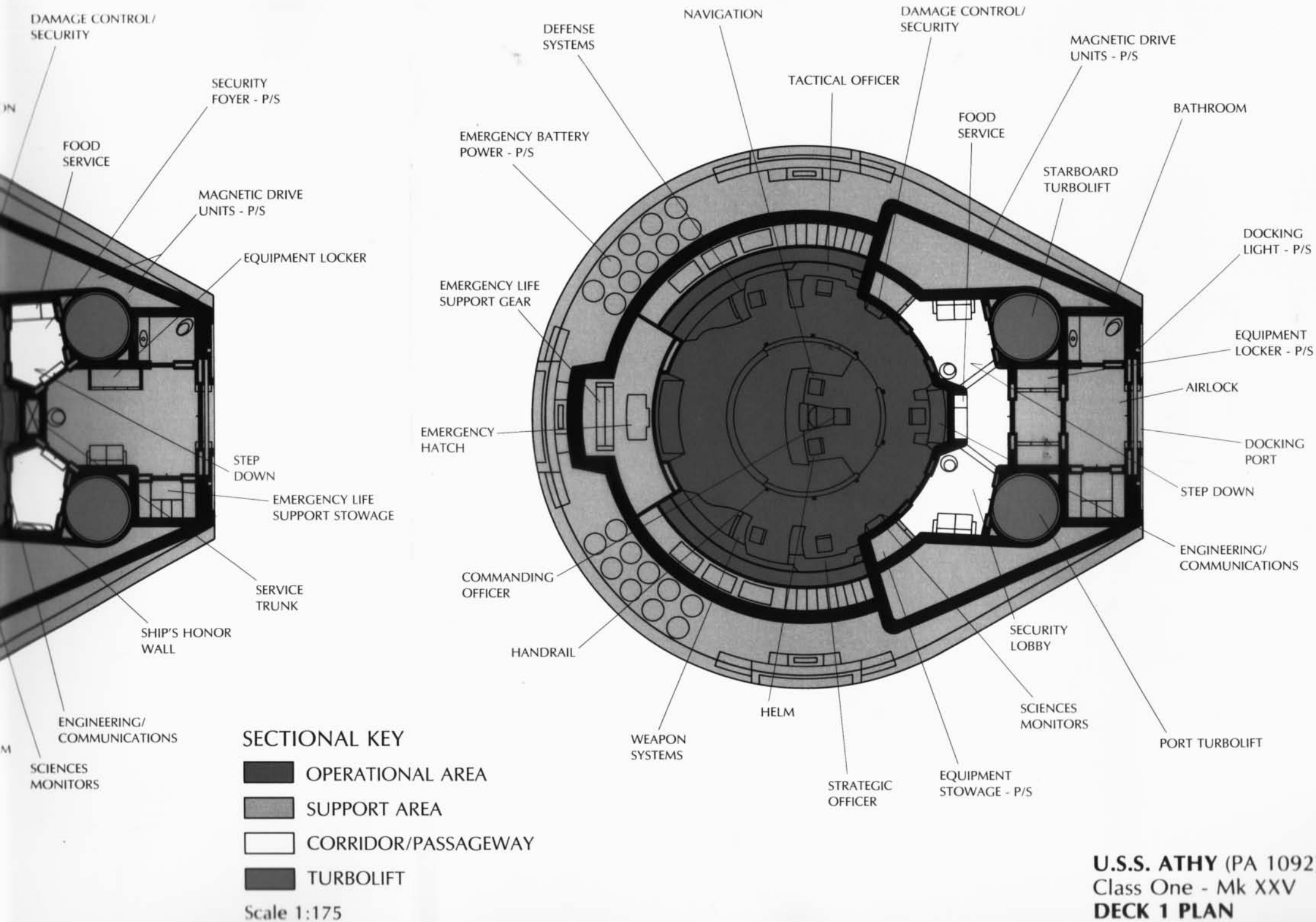


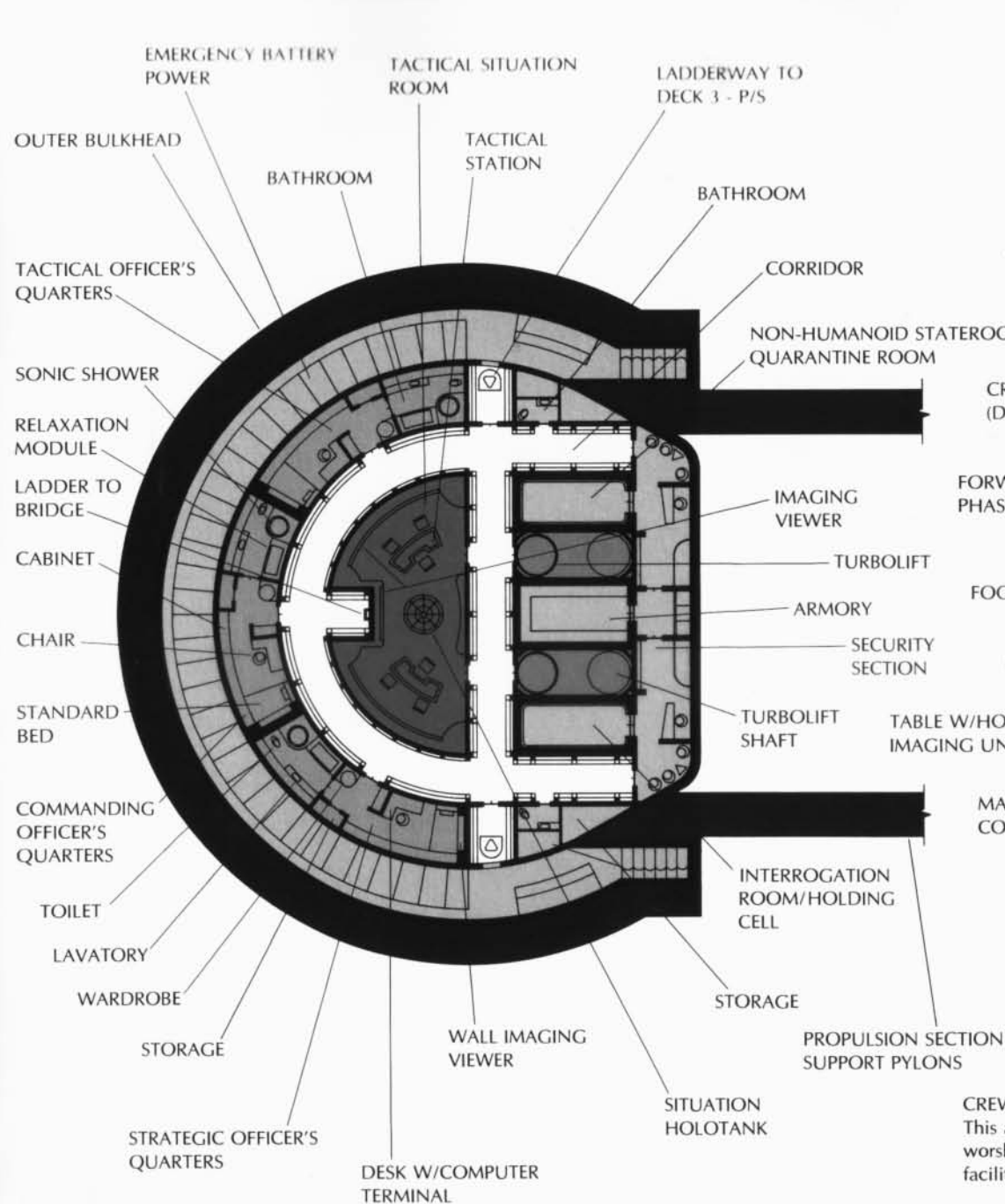


### SECTIONAL KEY

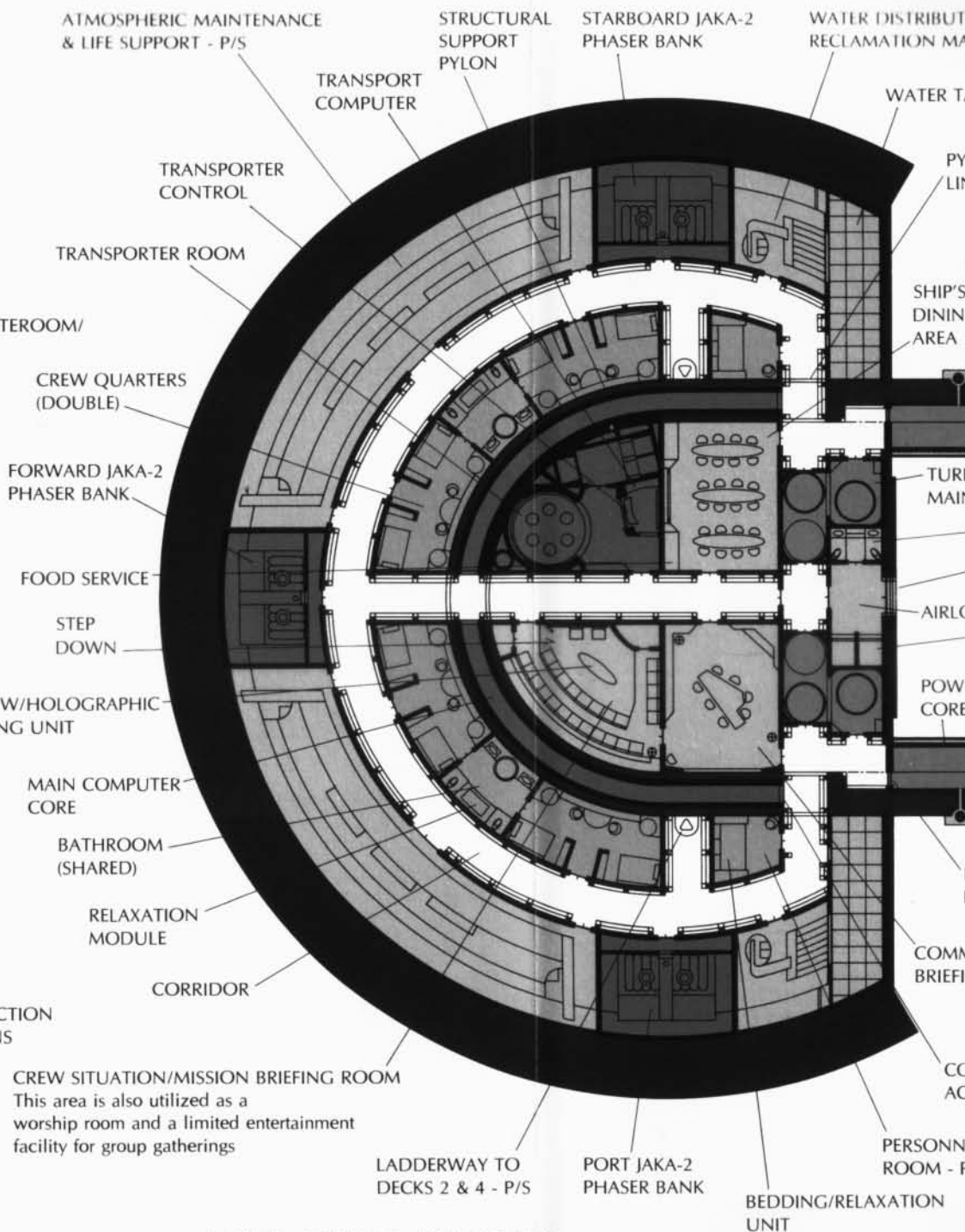
- OPERATIONAL AREA
- SUPPORT AREA
- CORRIDOR/PASSAGEWAY
- TURBOLIFT

Scale 1:175



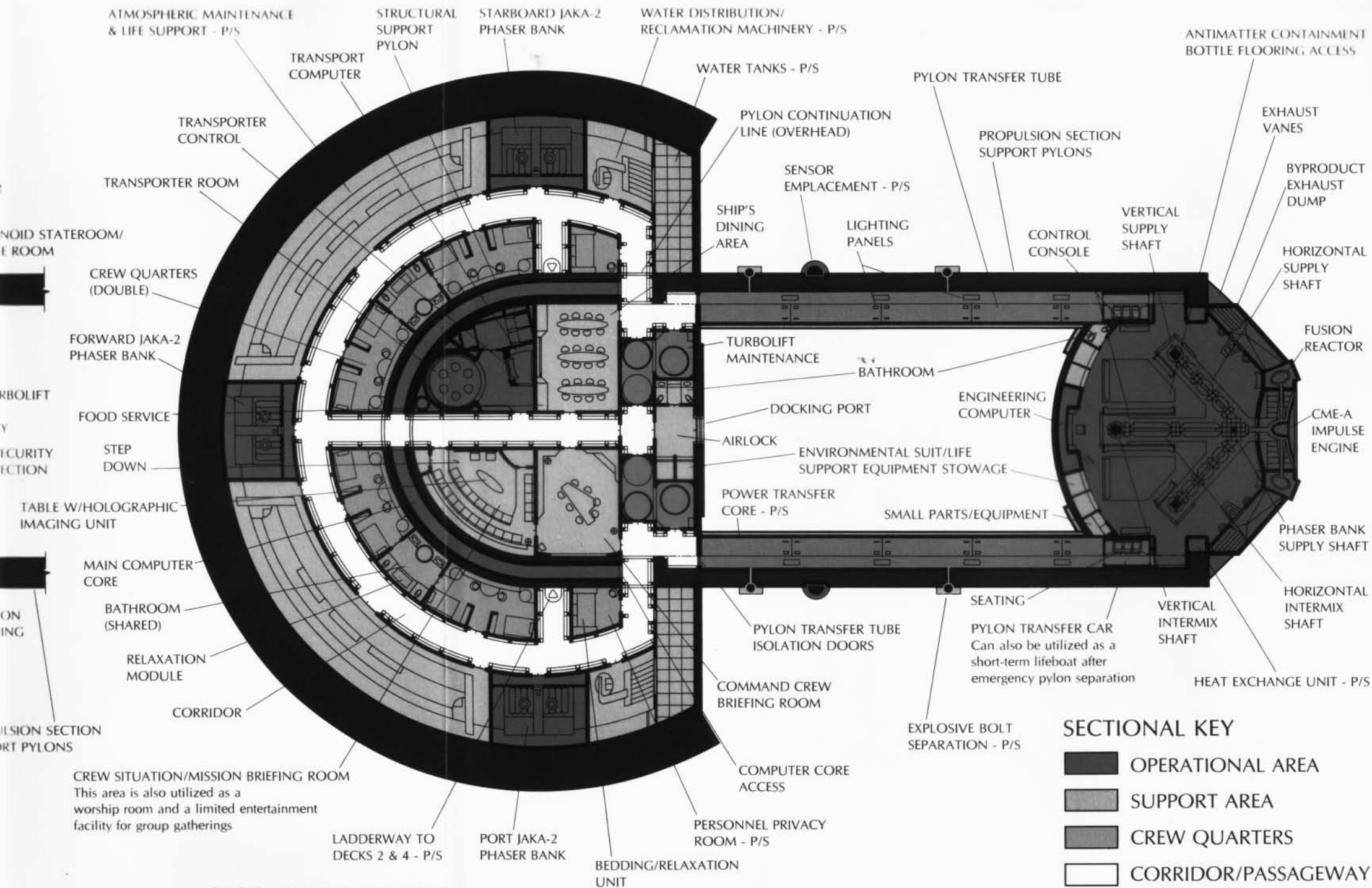


**U.S.S. AKULA (PA 1090)**  
**Class One - Mk XXV**  
**DECK 2 PLAN**



**U.S.S. AKULA (PA 1090)**  
**Class One - Mk XXV**  
**DECK 3 PLAN**

CREW QUARTERS  
 CAPACITY: 8 PERSONS



**U.S.S. AKULA (PA 1090)**  
**Class One - Mk XXV**  
**DECK 3 PLAN**

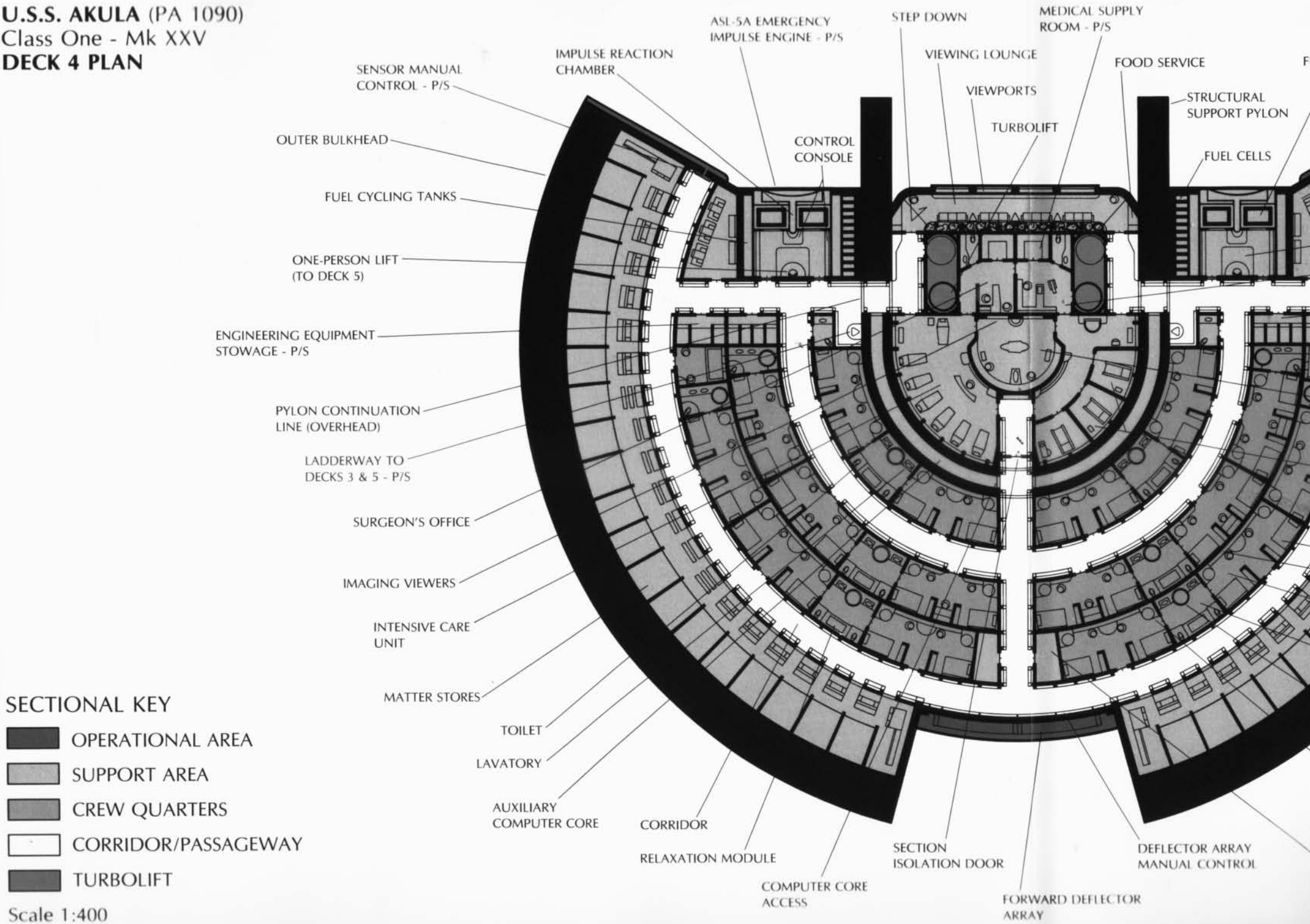
**SECTIONAL KEY**

- OPERATIONAL AREA
- SUPPORT AREA
- CREW QUARTERS
- CORRIDOR/PASSAGEWAY
- TURBOLIFT

Scale 1:400



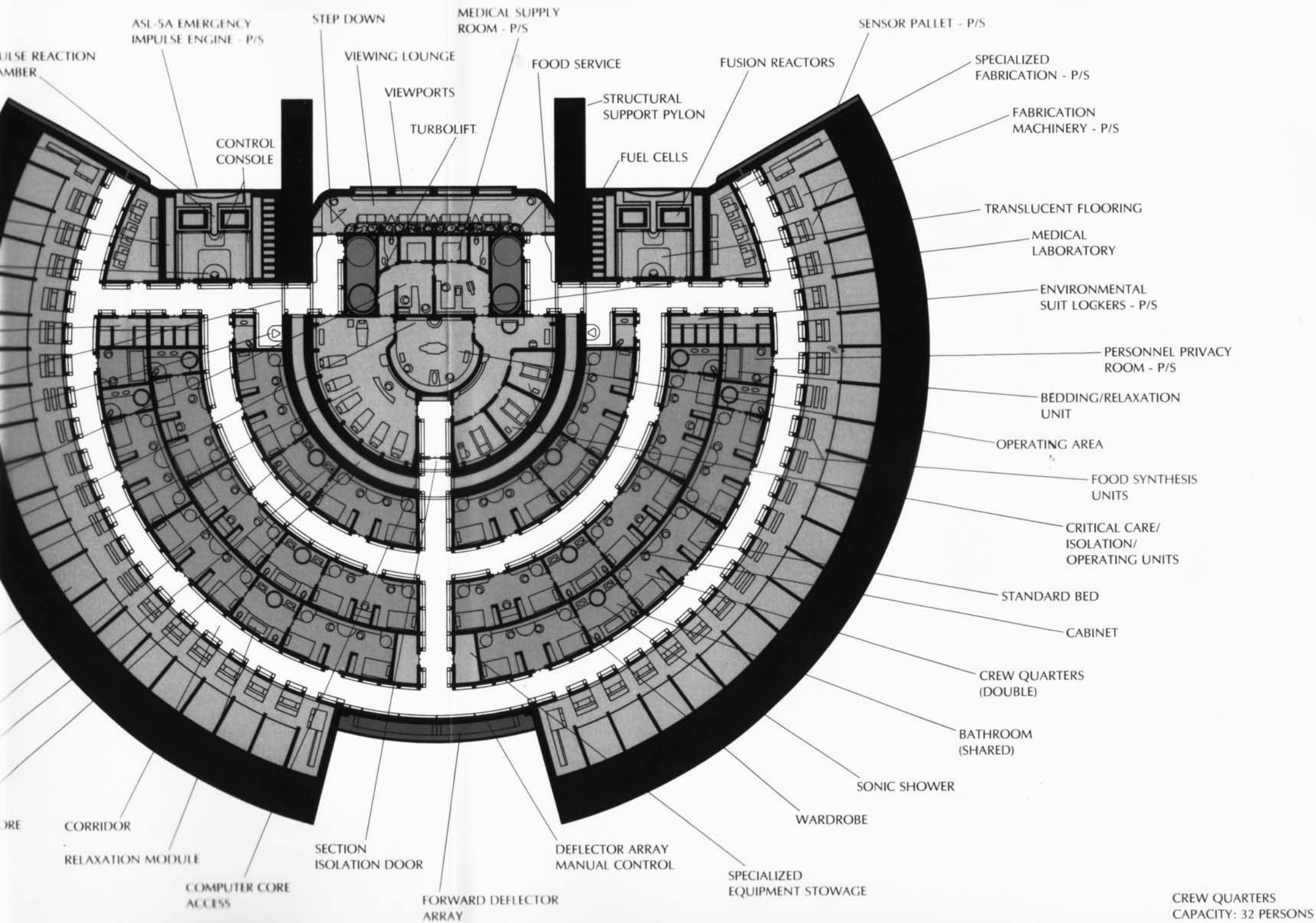
U.S.S. AKULA (PA 1090)  
Class One - Mk XXV  
DECK 4 PLAN



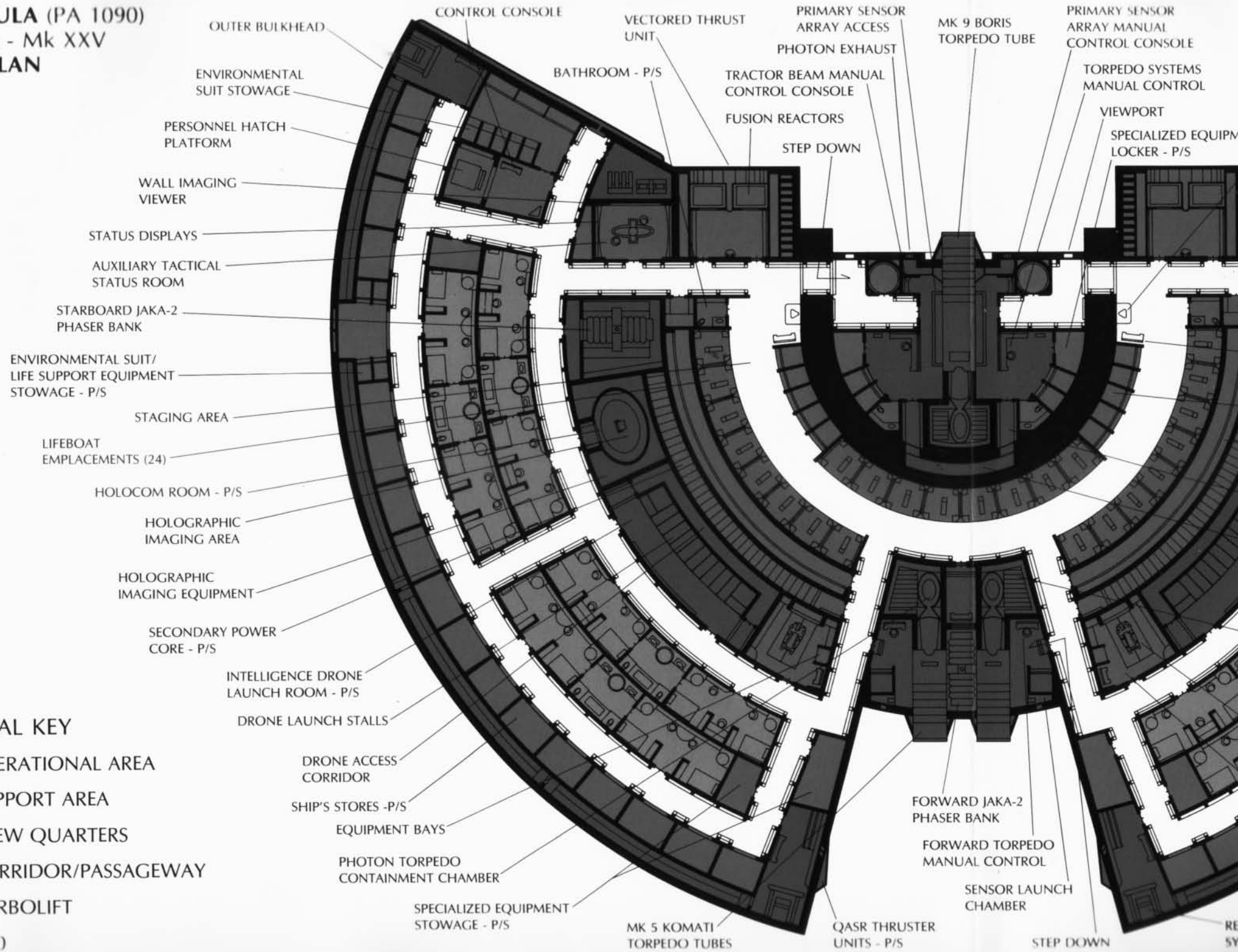
- SECTIONAL KEY
- OPERATIONAL AREA
  - SUPPORT AREA
  - CREW QUARTERS
  - CORRIDOR/PASSAGEWAY
  - TURBOLIFT

Scale 1:400





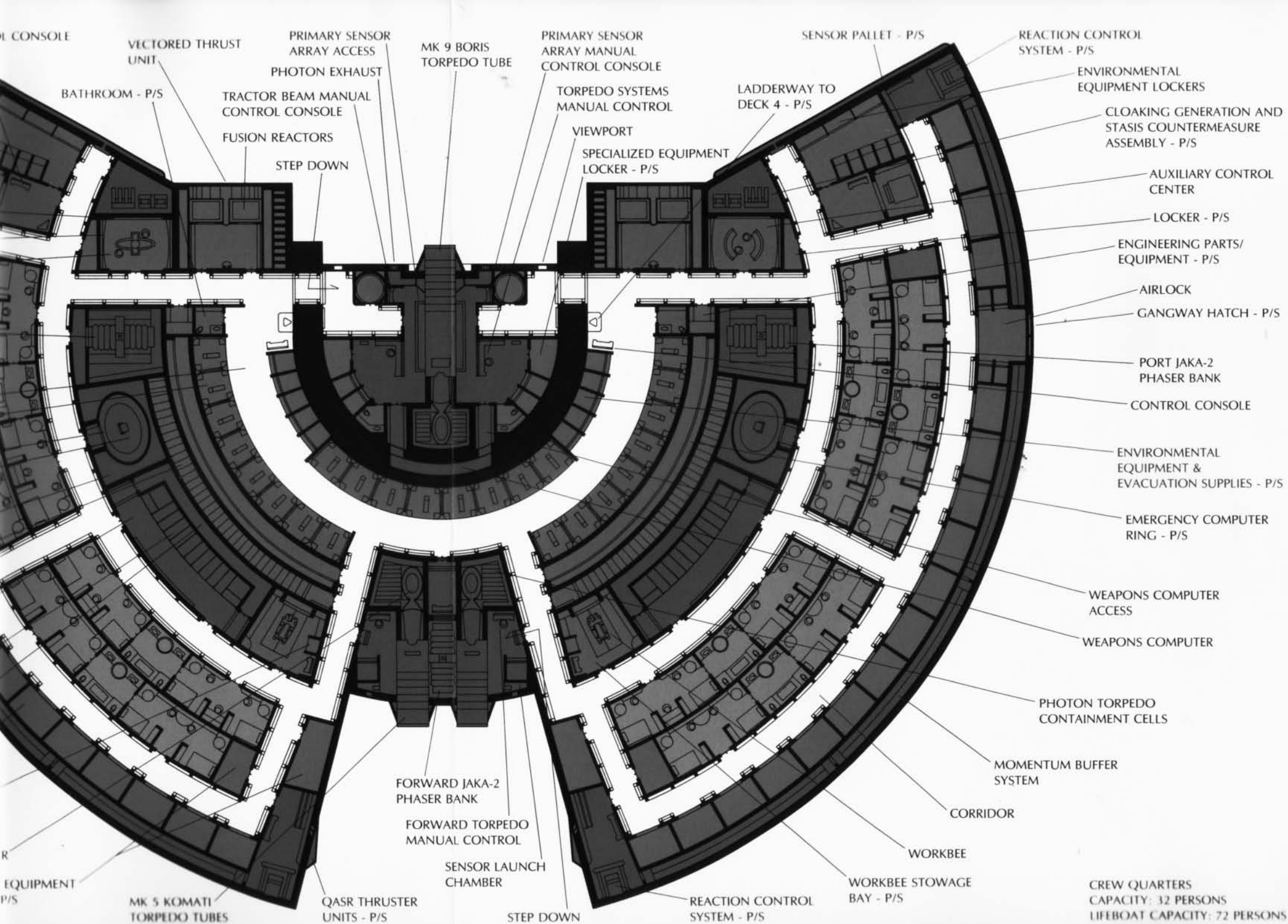
**U.S.S. AKULA (PA 1090)**  
**Class One - Mk XXV**  
**DECK 5 PLAN**



**SECTIONAL KEY**

- OPERATIONAL AREA
- SUPPORT AREA
- CREW QUARTERS
- CORRIDOR/PASSAGEWAY
- TURBOLIFT

Scale 1:400



"It follows then as certain as night succeeds day,  
that without a decisive naval force we can do  
nothing definitive, and with it everything  
honorable and glorious."

*George Washington*  
15 November 1781

"Not alone is the strength of the Fleet measured  
by the number of its fighting units, but by its  
efficiency, by its ability to proceed promptly  
where it is needed and to engage and  
overcome an enemy."

*Admiral Richard Wainwright, USN*  
Letter, 1911

“This manual provides valuable insight into the developmental history of one of the most powerful, versatile starship classes ever constructed for TacFleet - the *Akyazi*-class perimeter action ships.”

— *TacFleet Journal*

“The breadth of data presented on these ships is impressive . . . a principal source of information on all aspects of the *Akyazi* class.”

— *Starship Design*

“Calon Riel has provided an authoritative presentation on our newest guardians of the Frontier.”

— *Admiralty Command Journal*

“The specifications texts presented here are filled with information previously unavailable elsewhere. The systems data and internal deck plans exemplify the tremendous amount of research and data verification necessary for the production of this volume . . . a truly impressive work.”

— *Starship Tactics*

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