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VULCAN
SURAK CLASS

SURAK CLASS

LAUNCHED: 22nd C

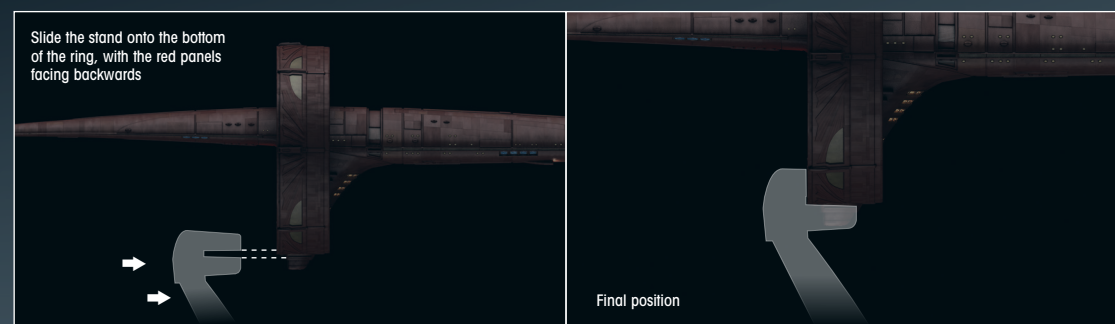
LENGTH: 350 METERS

MAX SPEED: WARP 7

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Stand assembly:



SURAK CLASS SPECIFICATION



OPERATED BY:	VULCAN HIGH COMMAND
CLASS:	SURAK
LENGTH:	350 METERS
TOP SPEED:	WARP 7
WEAPONRY:	PARTICLE BEAM EMITTERS
	PHOTONIC TORPEDOES
CAPTAINS:	VANIK, SOPEK

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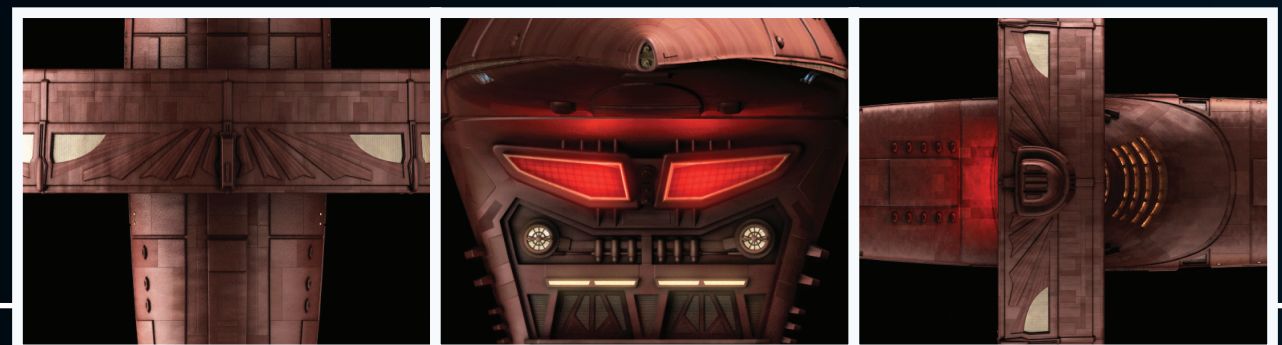
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◀ *Surak*-class ships had an unusual and distinctive design with a circular warp drive section surrounding a thin, elongated hull. They were among the most advanced ships in the Alpha Quadrant in the 22nd century, and few alien vessels could match their speed or tactical abilities.

DATA FEED

The script for 'Breaking the Ice' stated that the class name for the Vulcan ship was spelled 'Suurok,' which ties in with how Captain Archer pronounced the name. It seems much more likely, however, that it would be named 'Surak' after the founder of Vulcan philosophy, who placed logic above emotions.

In the mid-22nd century, the *Surak* class was one of the largest and most powerful ships in the Vulcan fleet. Its design comprised of a long, cylindrical primary hull, measuring approximately 350 meters in length, with a v-shaped section attached three-quarters of the way along its length that hung down below.

The most intriguing aspect of its construction was a ring-shaped warp drive structure that encircled the primary hull, but did not appear to be physically connected to it. In fact, the annular warp drive was attached to the rest of the ship near the bottom of the v-shaped structure, but from certain perspectives it appeared to just hang in place, apparently defying the laws of physics. How the Vulcans managed to engineer such an

arrangement was not clear, but their technology was far more advanced than that employed by Earth ships at this time. For example, the *Enterprise* NX-01 was the fastest ship in Starfleet with a top speed of warp 5, whereas *Surak*-class ships could achieve at least warp 6.5.

SEPARATE CONFIGURATIONS

The *Surak* class could be outfitted as either a science vessel or a combat cruiser. When it was configured as a science ship, it had a red-colored hull and a top speed of warp 6.5, but when it was built as a combat vessel, the hull was a copper color, while its maximum velocity rose to warp 7.

Despite the Vulcans' renowned pacifism, the *Surak* class was one of the most tactically advanced types of ship in the Alpha Quadrant in the 22nd century. They were equipped with deflector shields and multiple particle beam weapons that were considerably more powerful than the hull plating and phase cannons utilized by the *Enterprise* NX-01.

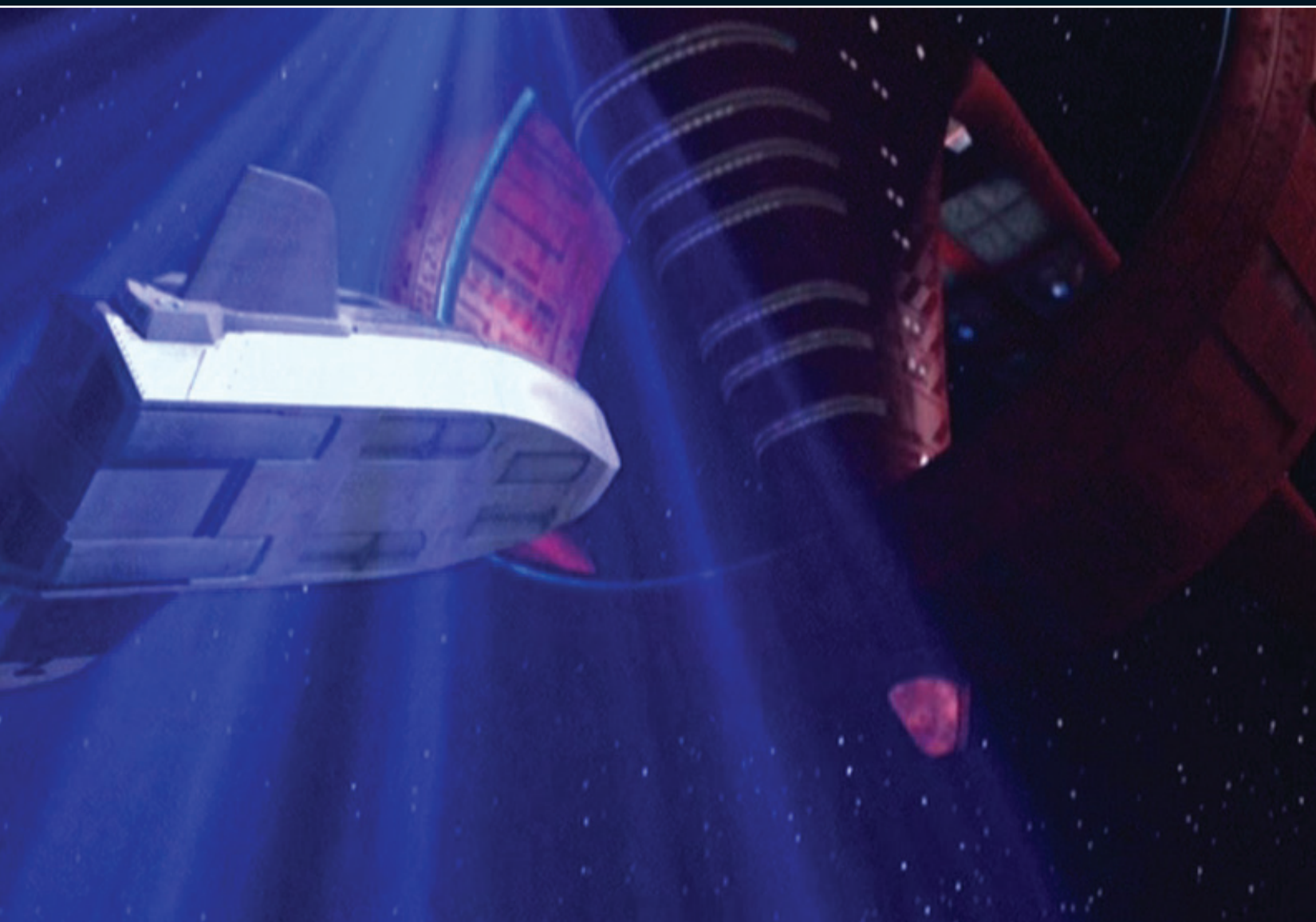
One of the reasons why Vulcan ships remained superior to Earth ships such as the *Enterprise* NX-01 was that the Vulcans refused to share their



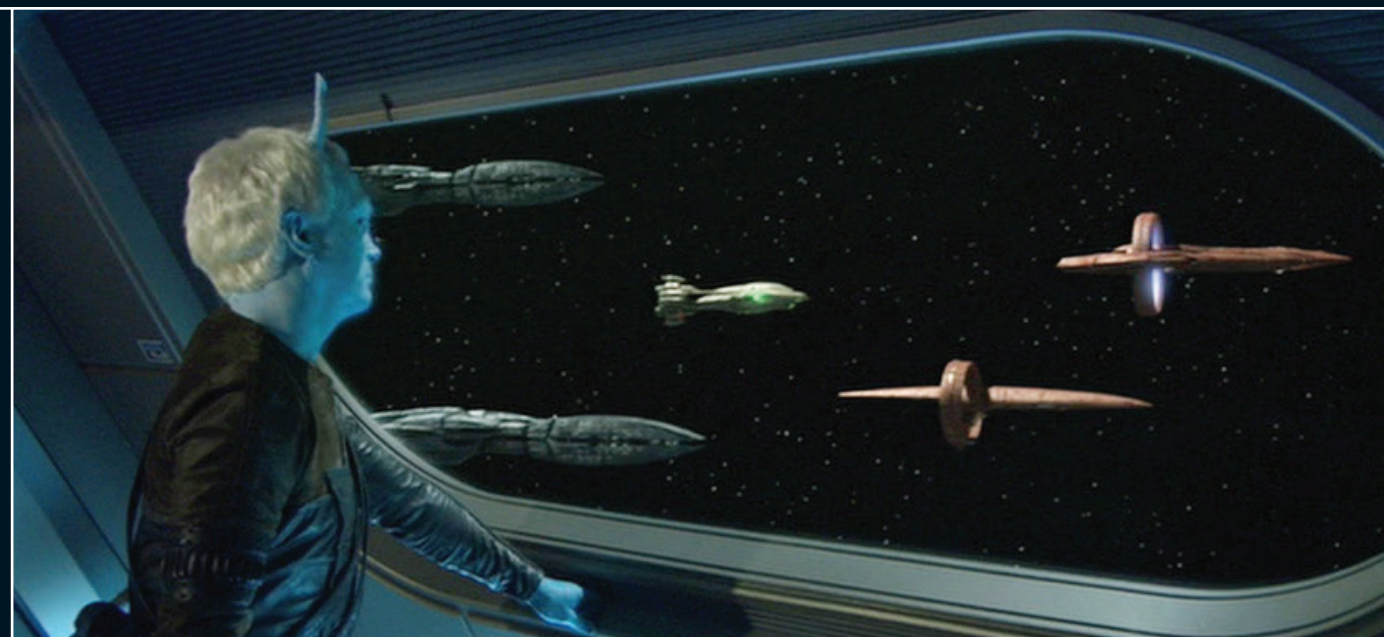
◀ The first *Surak*-class ship that the *Enterprise* NX-01 encountered was the *Ti'Mur* in 2151. Captain Archer was somewhat irked that the *Ti'Mur* appeared to be monitoring them while they surveyed a comet, but the Vulcans were in fact relaying personal messages to Subcommander T'Pol concerning her upcoming marriage to Koss.

VULCAN SURAK CLASS

The *Surak* class was a 22nd-century Vulcan ship that could be configured for science or combat duties.

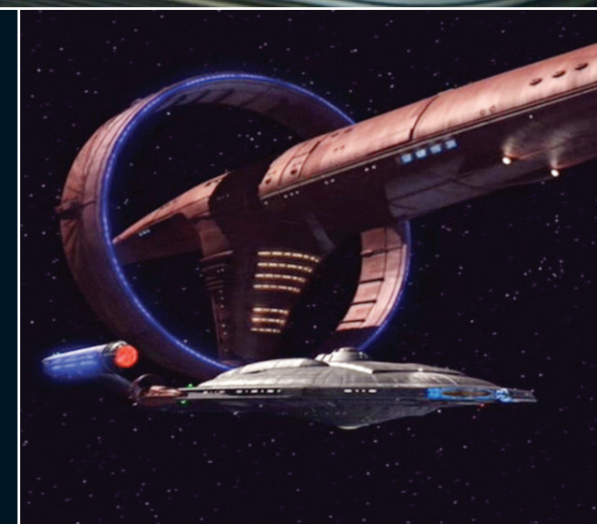


► *Surak*-class ships were part of a combined fleet made up of Earth, Andorian, Tellarite and other Vulcan vessels that worked together to locate a Romulan drone-ship. This alliance not only prevented the Romulan ship from carrying out further attacks, but it also led to a new era of cooperation that resulted in the formation of the Coalition of Planets.



◀ The *Sh'Raana*, a *Surak*-class combat cruiser, disabled three Mazarite warships that were trying to prevent the *Enterprise* NX-01 from transporting Ambassador V'Lar to Vulcan.

► *Surak*-class ships were considerably larger and more advanced than the *Enterprise* NX-01. It would be some years before the Vulcans trusted humans enough to share their technology with them.



▲ Unlike Earth ships of the mid-22nd century, Vulcan vessels were equipped with tractor beam technology. The *Ti'Mur* used its tractor beam to retrieve the *Enterprise* NX-01's shuttlepod after it fell through the icy surface of a comet and became trapped in a crevasse.

technology. They believed that humans were too volatile to be trusted to explore the galaxy unchecked. This meant that the Vulcans not only refused to share the technical specifications behind their warp and weapon systems, but they even kept seemingly benign hardware such as tractor beam technology classified.

The Vulcans' condescending attitude towards mankind's desire to explore the Galaxy rankled many in Starfleet, particularly Captain Archer, but he was glad of their help in 2151 when the *Enterprise* NX-01 investigated a huge comet. A shuttlepod was sent to retrieve samples from the comet, but it fell through the icy surface and became trapped in a fissure. The *Enterprise* NX-01 attempted to use its grappler to pull the shuttlepod free, but when this failed Archer was forced to

ask the *Ti'Mur*, a *Surak*-class science ship that had been observing them, for help. The *Ti'Mur* was able to use its tractor beam with precision to grab hold of the shuttlepod and pull it free with ease.

VULCAN RESCUE

Later in the year, the *Ni'Var*, a *Surak*-class combat cruiser, was sent to rendezvous with the *Enterprise* NX-01 in order to transfer T'Pol to Vulcan. Before she could be picked up, however, T'Pol and Captain Archer were captured by rebels while visiting Coridan. The commander of the *Ni'Var*, Sopek, then led a Vulcan commando team to help rescue them.

In 2152, a larger type of *Surak*-class combat cruiser named the *Sh'Raana* was sent to meet the *Enterprise* NX-01 in order to transport Ambassador

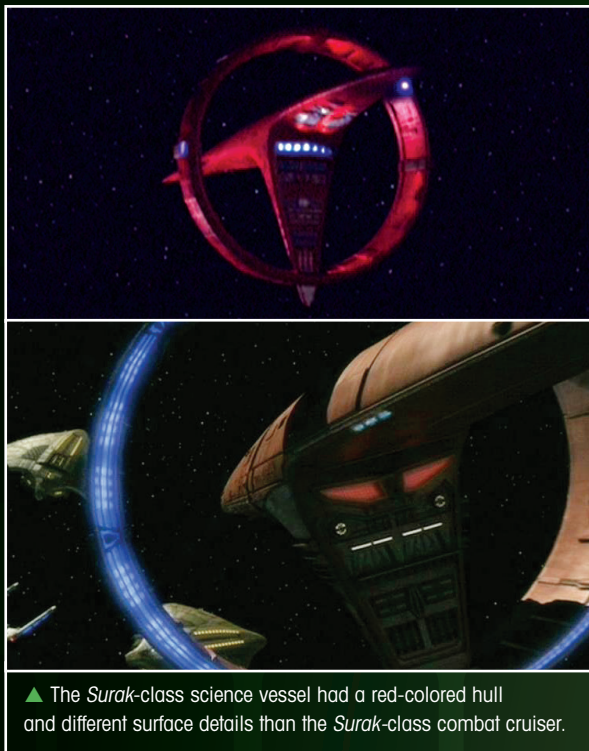
V'Lar back to Vulcan. The *Sh'Raana* was easily able to disable three Mazarite warships that had been dispatched to intercept the *Enterprise* NX-01 and capture Ambassador V'Lar, who was due to offer testimony against their corrupt government.

In 2154, *Surak*-class ships were part of a fleet of Andorian, Tellarite, Vulcan and Earth vessels that formed a sensor network in order to locate a Romulan drone-ship that had carried out a series of attacks. The allied fleet was successful in its endeavors and forced the drone-ship to withdraw to Romulan space. This unprecedented act of cooperation fostered a greater sense of trust between the Andorians, Tellarites, Vulcans and humans, and they founded the Coalition of Planets a year later, which in turn ultimately led to the formation of the Federation in 2161.

DATA FEED

Captain Vanik had been in command of the *Surak*-class *Ti'Mur* for 15 years. He had served in the Vulcan Space Program for 76 years, assuming command of his ship in 2136. Vanik was invited aboard the *Enterprise* NX-01 for a meal, but the occasion proved to be an awkward affair. Vanik refused to eat, even though he was offered Pok Tar, and he told Captain Archer that he had no interest in humans and found them arrogant.





▲ The *Surak*-class science vessel had a red-colored hull and different surface details than the *Surak*-class combat cruiser.

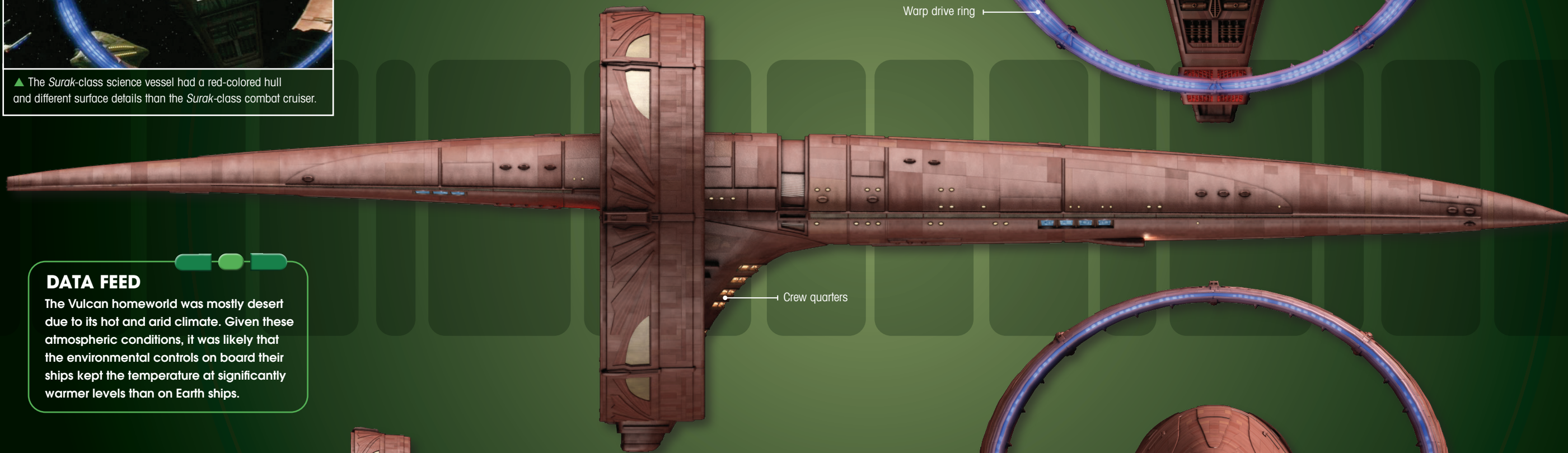
SURAK-CLASS VARIANTS

There were two different types of *Surak*-class vessel in operation in the mid-22nd century. The first was configured as a science vessel and was a similar red color to the *T'Plana-Hath*, the Vulcan survey ship that made first contact with humans in 2063. The second type of *Surak*-class ship appeared to have a longer and wider primary hull, and functioned primarily as a combat cruiser. It featured a copper colored hull and a different arrangement of features and lighting on the v-shaped structure that hung down below the horizontal primary hull.



Warp drive ring

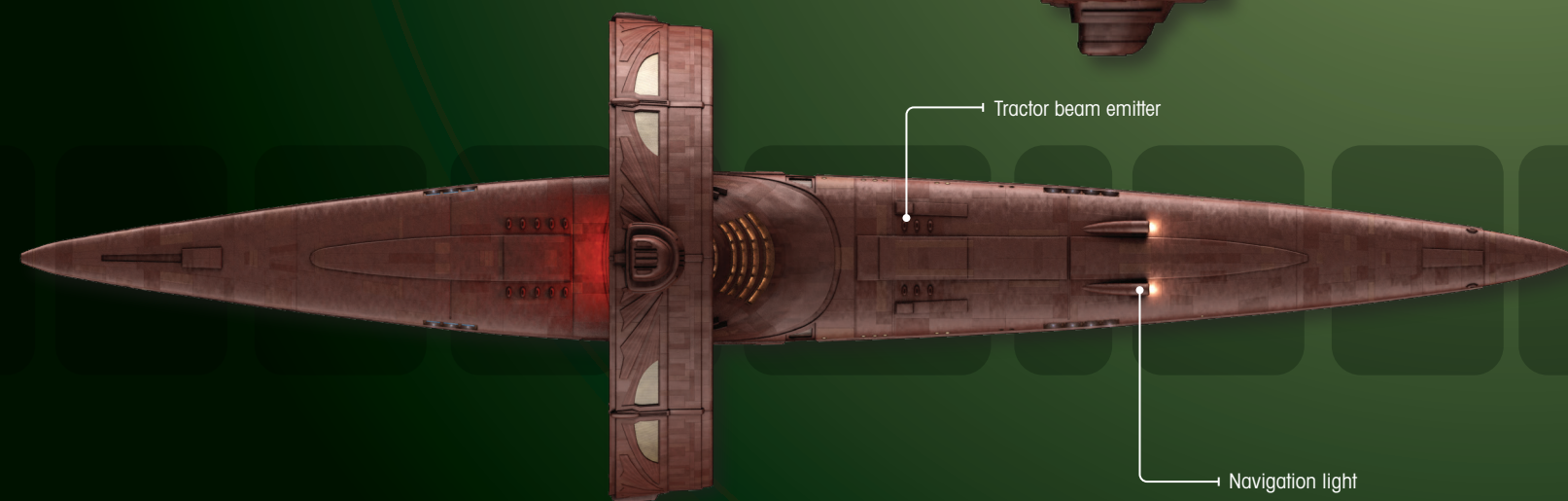
Impulse engine



Crew quarters

DATA FEED

The Vulcan homeworld was mostly desert due to its hot and arid climate. Given these atmospheric conditions, it was likely that the environmental controls on board their ships kept the temperature at significantly warmer levels than on Earth ships.



Tractor beam emitter

Navigation light



Warp drive ring

VULCAN FLEET SHIPS

In addition to the *Surak* class, other Vulcan ships known to be in operation in the 22nd century included the *Maymora* class, and the *D'Kyr*-type combat cruiser, which had a standard crew complement of 147.

RACE RELATIONS

Species that the Vulcans had made contact with by the 22nd century included the Cardassians, Trill, Tholians and Klingons.

ANNOYING HUMANS

Vulcans often found it too chaotic and unpredictable to serve on ships with humans. T'Pol was not the first Vulcan to be assigned to an Earth ship, but previous Vulcans who had taken up posts alongside humans lasted only a few weeks. Even in the 24th century, Starfleet operated ships crewed entirely by Vulcans.

▼ Despite the Vulcans being the earliest and most established alien race on *STAR TREK*, the *Surak* class was the first major Vulcan ship ever to appear on screen.



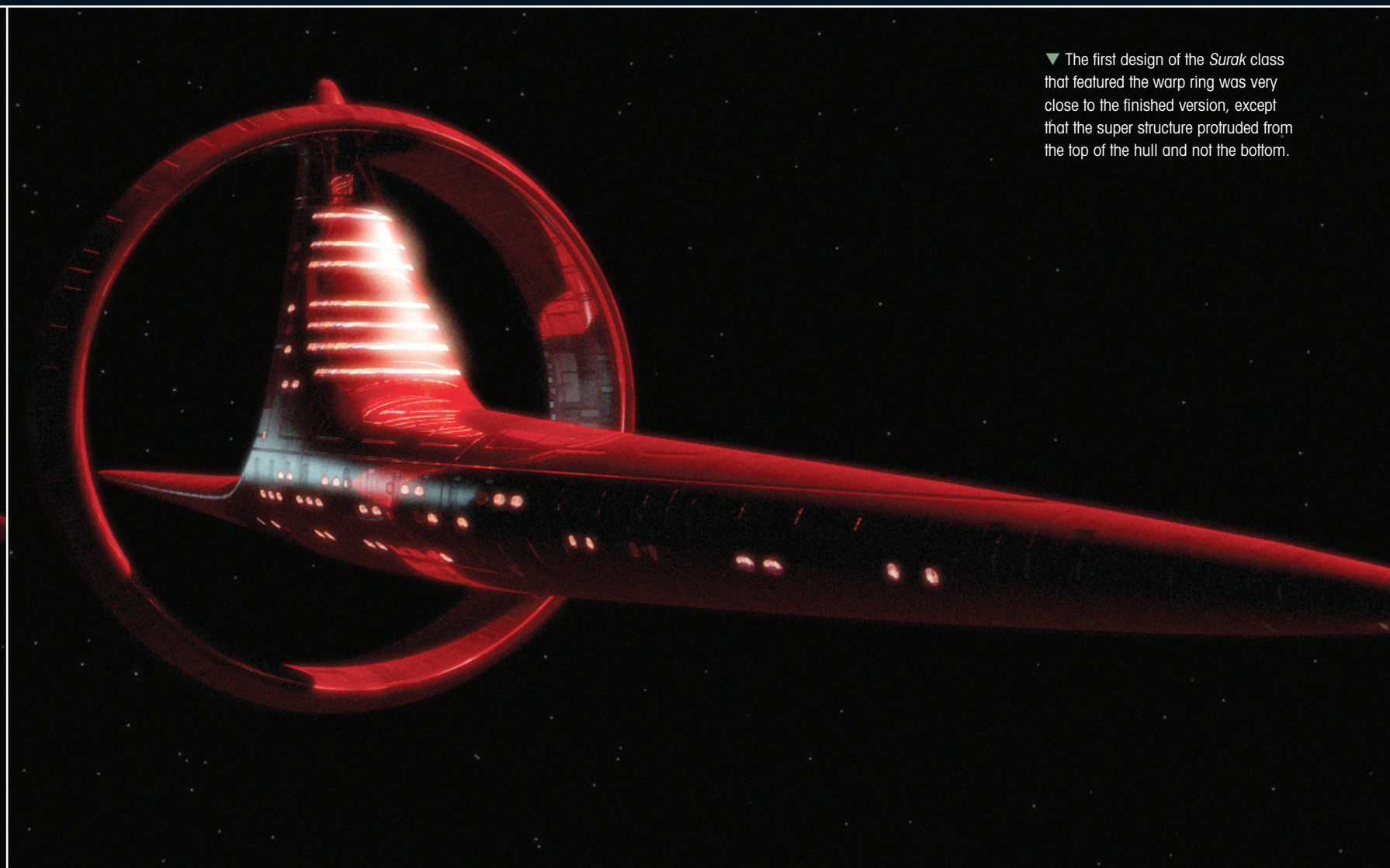
◀ One early design that Doug Drexler came up with was directly inspired by the *T'Polana-Hath* that appeared in *STAR TREK: FIRST CONTACT*.

DESIGNING THE SURAK CLASS

The *Surak* class was designed by Doug Drexler to be distinctive and instantly recognizable as a Vulcan ship.

Despite a long and distinguished history in *STAR TREK*, the Vulcans have had remarkably few ships. The audience didn't see a single one in *STAR TREK: THE ORIGINAL SERIES*, and in seven years of *STAR TREK: THE NEXT GENERATION* they glimpsed only a solitary group of Vulcan ships in the episode 'Unification, Part II.'

The Vulcans, however, were an essential part of *STAR TREK: ENTERPRISE*, and, since they hadn't shared all of their technology with humans, it was obvious that they would have their own ships. And, sure enough, the script for 'Breaking the Ice' featured a Vulcan ship called the *Ti'Mur*. Because production illustrator John Eaves was busy working



▼ The first design of the *Surak* class that featured the warp ring was very close to the finished version, except that the super structure protruded from the top of the hull and not the bottom.

▲ Drexler illustrated an alternative look for the *Surak* class that featured conical engine pods and a sphere instead of a saucer section. This design was also inspired by an illustration that Matt Jefferies had experimented with when creating the original *U.S.S. Enterprise*.

on the new movie, *STAR TREK NEMESIS*, the task of designing the *Ti'Mur* fell to his colleague and senior illustrator Doug Drexler.

HISTORIC VESSEL

Drexler knows *STAR TREK* inside out, so he was all too aware of the responsibility he was being given. "When I was asked to come up with a design for the Vulcan ship, it was a little bit daunting," said Drexler. "After all, here was undoubtedly one of *STAR TREK*'s most important and influential extra-terrestrial civilizations, yet we knew very little about the Vulcans."

Drexler went on to explain that the task was even more daunting because, in more than 600 episodes, *STAR TREK* had never really established a design ethic for Vulcan ships. "Their background had been shrouded in secrecy and antiquity," said

Drexler. "Also, because they had played such an important role in *THE ORIGINAL SERIES*, Gene Roddenberry had made a conscious decision to keep them out of the limelight on *THE NEXT GENERATION*."

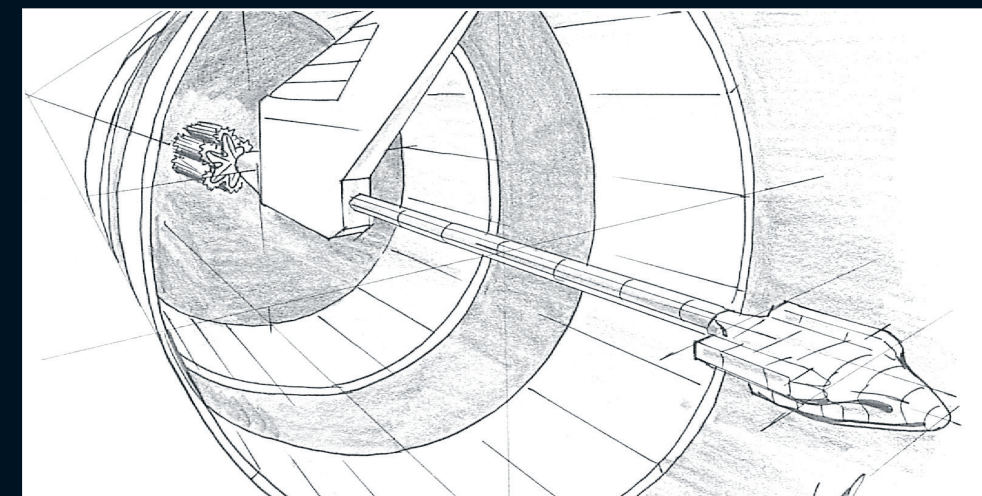
Given that the new Vulcan ship was likely to make many appearances on *ENTERPRISE*, Drexler wanted to be sure that it was as memorable as possible. "When you were designing ships for *STAR TREK*," said Drexler, "it was smart to note that the starship designs that have endured and flourished since *THE ORIGINAL SERIES* were the distinctive Federation cruiser, like the original *Enterprise*, and the classic Klingon battle cruiser, both of which were invented by original *STAR TREK* design bard Walter 'Matt' Jefferies.

"What was it that made Matt's designs so striking and enduring? In my opinion, the answer lay in

their simplicity and distinctive profile. If you looked at his sketches for *THE ORIGINAL SERIES*, you could see that they were not overworked; the design was clear, clean, and recognizable, even when you squinted, or if the vessel was the size of a quarter on screen. Sometimes ships of the week looked like potatoes when seen from a distance. A hero ship for a hero race needed to pass the squint test."

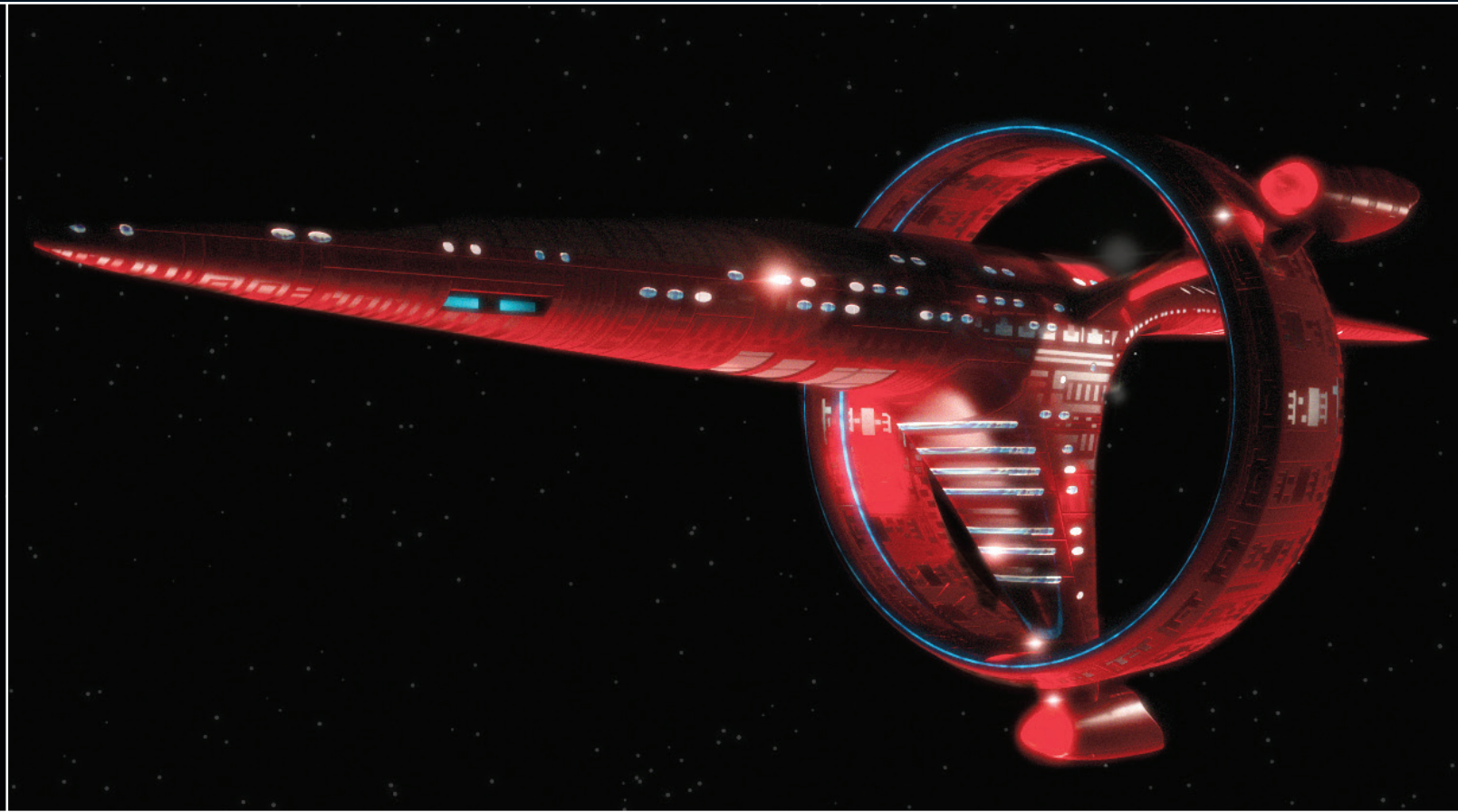
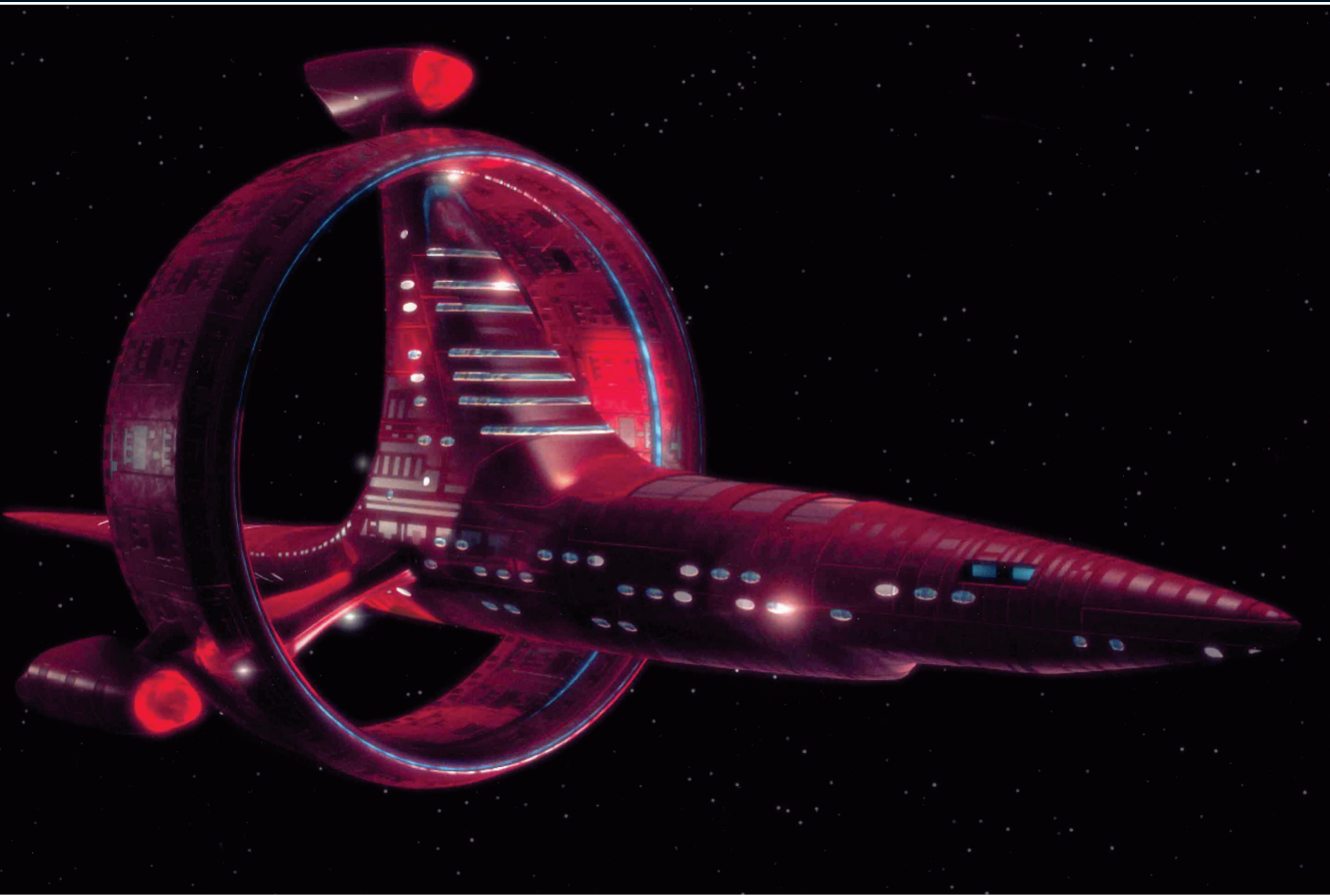
ORIGINAL INSPIRATION

Of course, Jefferies had never designed a Vulcan ship, but Drexler knew that he had developed something that might work for him. When Jefferies was designing the original *U.S.S. Enterprise*, he experimented with a distinctive shape that consisted of a long, thin ship with a large, hoop-shaped engine. Jefferies had rejected it as impractical, but Drexler said he was intrigued by it.



"In my mind, that was a classic design," said Drexler. "It had an unmistakable profile; it couldn't be confused with anything else. It was actually seen once as a fleeting background portrait of

▲ Drexler's design was inspired by one of Matt Jefferies' concepts for the original *U.S.S. Enterprise*.



◀ [Far left] Once the basic design had been approved, Drexler experimented with another version that included engine pods inspired by the *T'Polana-Hath* from *STAR TREK: FIRST CONTACT*.

◀ [Near left] One of the last changes involved flipping the ship upside down. Drexler felt that this looked better, and he later removed the pods so it appeared as if the warp ring was just hanging in place without support.

a starship in *STAR TREK: THE MOTION PICTURE*. "All these ships were called 'Enterprise,'" Decker told Ilia, which, by the way, established that there were starships called *Enterprise* apart from those on the wall in Picard's observation lounge. That portrait also established that Earth's starship designers were going to flirt with a configuration that dramatically deviated from the standard saucer with nacelles.

"*ENTERPRISE* had established the Vulcans as our guarded mentors," continued Drexler. "We were slightly annoyed at them, while at the same time admiring these aloof, analytical, and strangely beautiful people. 'Ah,' I thought, as I mulled over the Vulcan ship design question for *ENTERPRISE*. 'This was the perfect place to fit the hoop ship.'

VULCAN INSPIRATION

"The script stated that Trip would be ga-ga over this *Surak*-class starship. After laying eyes on it, there was no question in my mind that he went to bed that night puzzling out the exotic shape. We humans would certainly have to build one of these – if you get a minute, go on the Internet and look at the Soviet space shuttle. I figured that was what happened, but obviously it was a brief flirtation, because we ended up sticking to our very human saucer-nacelle configuration."

Having decided to work with Jefferies' design, Drexler made some modifications to make it look more Vulcan. He gave it curves and peaks that were inspired by the Vulcan temple and clothing that were seen in *STAR TREK III: THE SEARCH FOR*

SPOCK, and John Eaves' design for the Vulcan scout ship that appeared at the end of *STAR TREK: FIRST CONTACT*.

ALTERNATIVE DESIGNS

Although Drexler was in love with the hoop design, he wouldn't have been doing his job if he hadn't provided production designer Herman Zimmerman and executive producers Rick Berman and Brannon Braga with some alternatives. Consequently, he worked up two other designs to show them. "One echoed some of the shapes seen in the Vulcan lander," said Drexler. "The other foreshadowed the giant sphere of the *U.S.S. Pasteur*, which was inspired by another Matt Jefferies concept for the *Enterprise* that he'd labeled the *U.S.S. Independence*. Needless to say, I was delighted that Rick and Brannon went for the exotic hoop and arrow, and I felt that the *Surak*-class ship would enjoy a longevity if only for that certain Jefferies 'je ne sais quoi.'"

The next stage of the process involved refining the shape of the ship; Drexler started by turning out some variations that showed it with subtly different

body shapes and engine pods. One change involved turning the ship upside down.

"I just realized that it looked better defying gravity rather than hanging from the hoop," said Drexler, "and Herman, Rick, and Brannon heartily endorsed that approach." The other change involved eliminating any physical connection between the body of the ship and the hoop, so they are actually separate elements.

"We liked the defiance of conventional structural support," Drexler explained. "It made the Vulcans look like they controlled powers beyond human ken. This was true of the original *Enterprise*. The struts that supported the nacelles defy what we understand today. It said that these people were masters of technologies that we didn't yet understand. It speaks volumes for the technology at play."

Finally, once the design was approved, Drexler's design was sent to Eden FX, who put it into action in the episode 'Breaking the Ice.' After that, it made several more appearances alongside the *Enterprise* NX-01, another ship that was directly inspired by Matt Jefferies' original designs.

▼ Decker showed Ilia the ships that had been called *Enterprise*, including the one with Jefferies' hoop design.



► The CG model of the *Surak* class was rebuilt at Eden FX by Pierre Drolet. He added more surface detail, such as the red glow of the impulse engines, and he added a weathered texture to the hull.

CREATING THE CG SHIP

After its first brief appearance, the CG *Surak*-class model underwent an upgrade that allowed it to be seen in much greater detail.

By the time *STAR TREK: ENTERPRISE* debuted in 2001, physical studio models of the ships were no longer used for filming as the move had been made to CG models. It was not only faster and cheaper to use CG, but the technology had moved on to the point that they looked almost photorealistic, while they could also be made to perform more elaborate maneuvers than was possible with studio models.

As it transpired, for the *Surak* class' first appearance onscreen as the *Ti'Mur* in the *STAR TREK: ENTERPRISE* episode 'Breaking the Ice,'

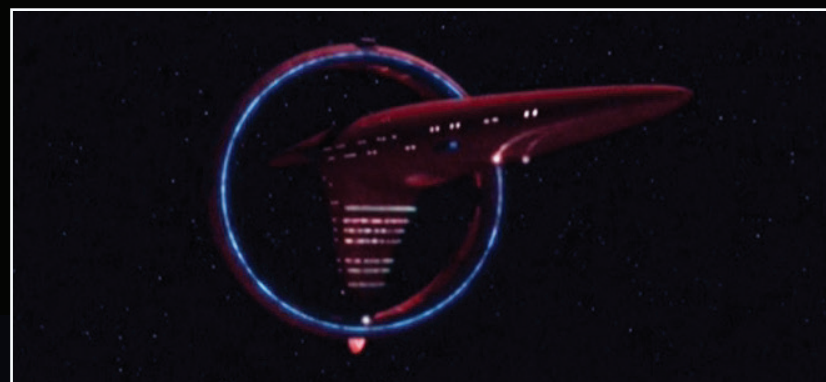
the ship was not required to do anything too complex. For this reason, Doug Drexler rendered out a low to medium resolution CG model of his own design in just a couple of days. The *Ti'Mur* was seen only briefly on the *Enterprise* NX-01's viewscreen, so it was not worth the time of making a highly detailed CG model in what was already a busy episode for the effects team.

While this rendering of the *Surak*-class ship was sufficient for its brief debut appearance, it was not detailed enough for close-up shots, nor could it be lit if it was to appear alongside other ships

in the same frame. A higher resolution version of the *Surak*-class ship was therefore created at effects house Eden FX. Senior CG supervisor Robert Bonchune explained, "The original model was just not up to snuff for what we needed, so it was superseded. It was revised by model builder Pierre Drolet to include better detail and texturing, as well as modified dimensions."

In the process of upgrading the *Surak*-class model, the finer details of the design changed. For example, glowing red impulse engines and shuttle bay doors were added on the back of the v-shaped structure that hung down below a longer primary hull. The most notable transformation was that the hull changed from red to a rust-copper color. This was done to give the ship a more textured appearance, and help it look more realistic when seen in close-up shots.

These alterations led some people to speculate that the Vulcan ship seen in subsequent episodes was not actually a *Surak*-class ship, but a distinct class of its own. As Bonchune explained, this was not the intention, "They were theoretically the same ship, not two different classes or types. Whenever the producers asked for the *Surak* class, they always meant the one we rebuilt from Doug Drexler's original. They were definitely intended to be the same class of ship."

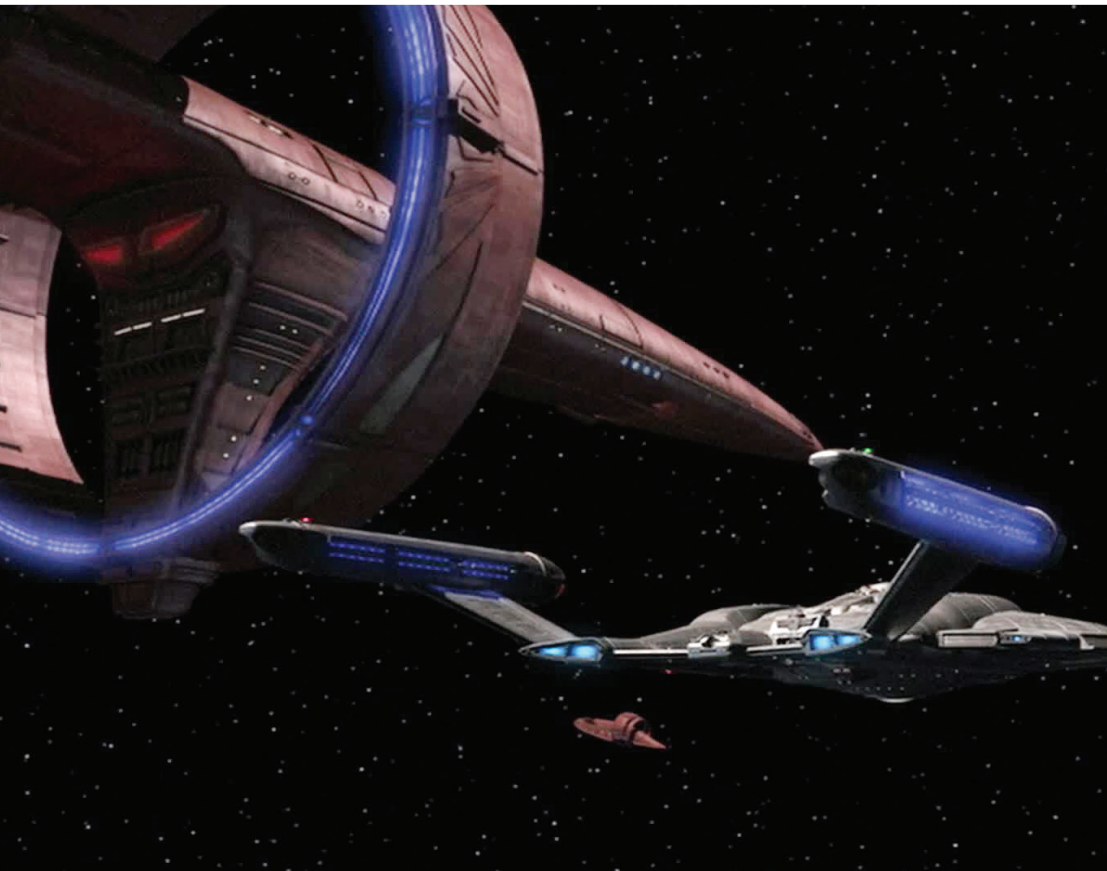


◀ Deadlines meant that the original *Surak*-class CG model was created against the clock and it was never intended to be seen in too much detail.



► The overall look of the *Surak* class remained the same when a higher resolution model was created, but the details were sharpened up.

ON SCREEN



TRIVIA

Earlier in her career, before being assigned to the *Enterprise* NX-01, T'Pol served as deputy science officer aboard the *Seleya*, a Vulcan *D'Kyr*-type combat cruiser. The ship was lost with all hands in 2152 when it became caught in a subspace eddy and was pulled into the Delphic Expanse, a region of space riddled with dangerous spatial anomalies. The true fate of the *Seleya* was not discovered until 2153, when the *Enterprise* NX-01 found it still adrift inside the Expanse. Its crew had been driven insane due to exposure to trellium-D, a mineral that had a neurotoxic effect on the Vulcans' brain chemistry.



Ambassador V'Lar was played by Fionnula Flanagan. The Irish actress had previously appeared as Dr. Noonian Soong's partner Juliana Tainer in the *STAR TREK: THE NEXT GENERATION* episode 'Inheritance,' and as Enina Tandro in the *STAR TREK: DEEP SPACE NINE* episode 'Dax.'



It is learned in the *STAR TREK: ENTERPRISE* episode 'Breaking the Ice' that Captain Archer was once a guest aboard the *Yarahla*, a Vulcan *Maymora*-class ship, when it was on a mission to a dark matter nebula to set up a graviton telescope.

TV APPEARANCE:	STAR TREK: ENTERPRISE
FIRST APPEARANCE:	'BREAKING THE ICE' (ENT)
FINAL APPEARANCE:	'UNITED' (ENT)
DESIGNED BY:	Doug Drexler

KEY APPEARANCES

STAR TREK: ENTERPRISE 'BREAKING THE ICE'

While investigating the largest comet ever observed by humans, the *Enterprise* NX-01 has its first encounter with a *Surak*-class ship. Vanik, the captain of the Vulcan ship, claims that they merely want to observe the *Enterprise*, but Captain Archer is suspicious, especially after they discover that the Vulcans are sending coded messages to T'Pol. Meanwhile, Lt. Reed and Ensign Mayweather become trapped on the surface of the comet while drilling for eisilium, and Archer is forced to ask the Vulcans for help.

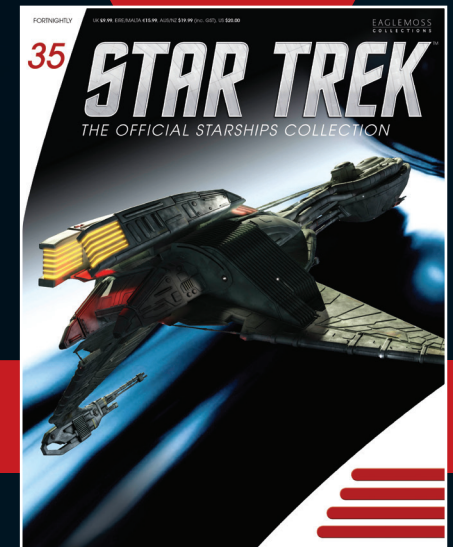
STAR TREK: ENTERPRISE 'FALLEN HERO'

The *Enterprise* NX-01 receives an urgent request to pick up Vulcan Ambassador V'Lar from Mazar, as she has been found guilty of criminal misconduct. The *Enterprise* is ordered to transport V'Lar to a rendezvous with the *Sh'Raan*, a *Surak*-class combat cruiser. No sooner has the *Enterprise* collected V'Lar than the Mazarites demand her return. When Captain Archer refuses, the *Enterprise* is attacked by three Mazarite warships and is forced to flee. It then becomes a race to reach the safety of the *Sh'Raan* before the *Enterprise* is destroyed.

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- A look at John Eaves' designs for the Klingon *Bird-of-Prey*
- Creating the CG Klingon *Bird-of-Prey* for *STAR TREK: ENTERPRISE*



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