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**V'GER**  
SPECIAL ISSUE

LAUNCHED: 1999

TYPE: EVOLVED PROBE

POWER: TWELFTH POWER

LENGTH: 300 MILLION KM

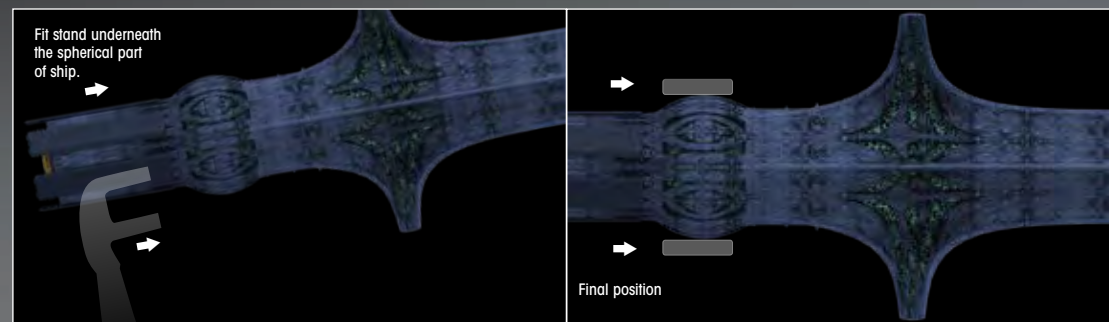
# Contents

04: DESIGNING V'GER THE LIVING MACHINE

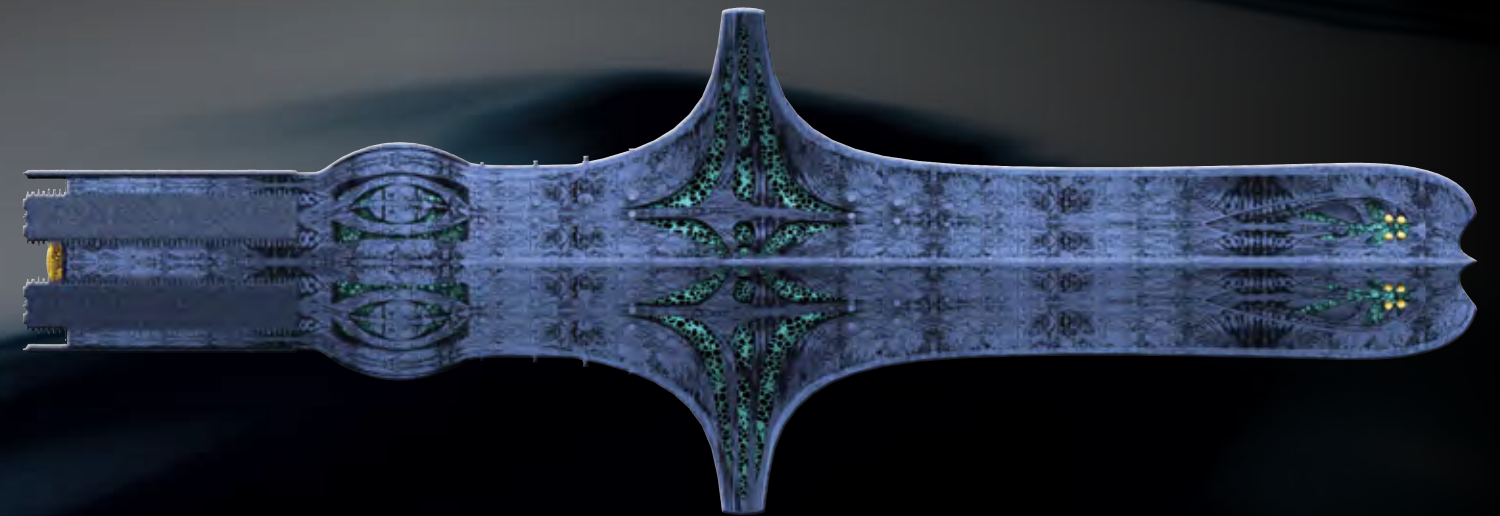
14: DESIGNING THE TRIP INSIDE V'GER

18: STAR TREK AND ILM: BRINGING BACK THE MAGIC

## Stand assembly:




## V'GER SPECIFICATION




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# V'GER


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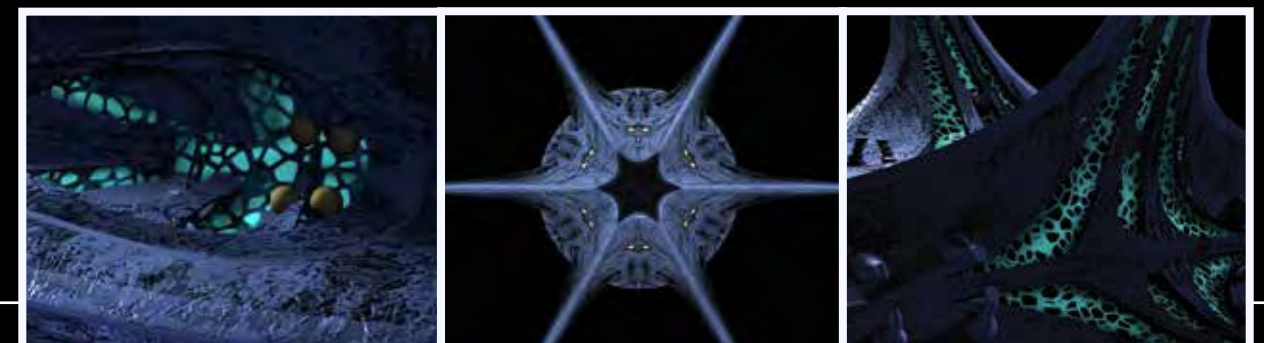
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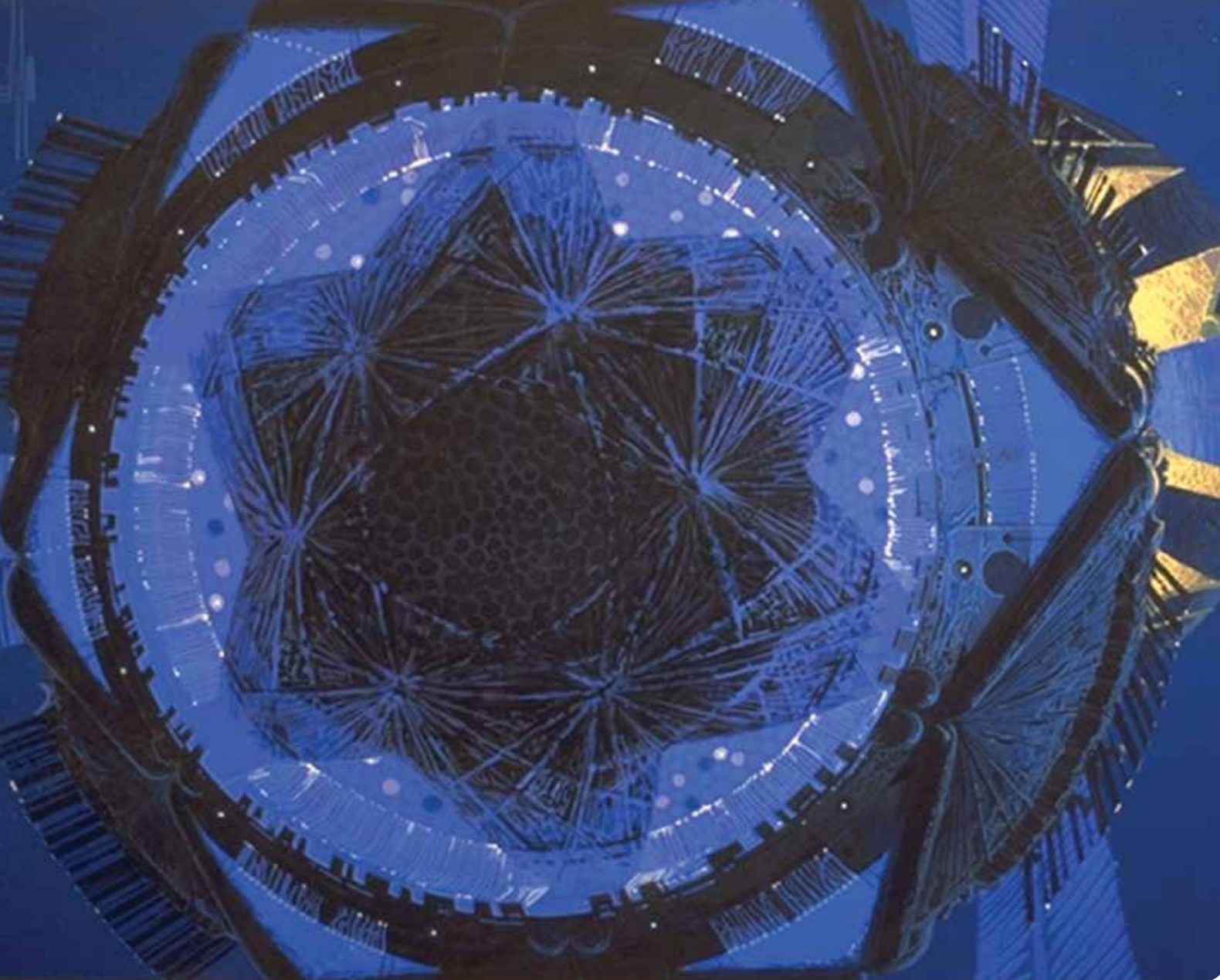
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## DESIGNING

# V'GER THE LIVING MACHINE

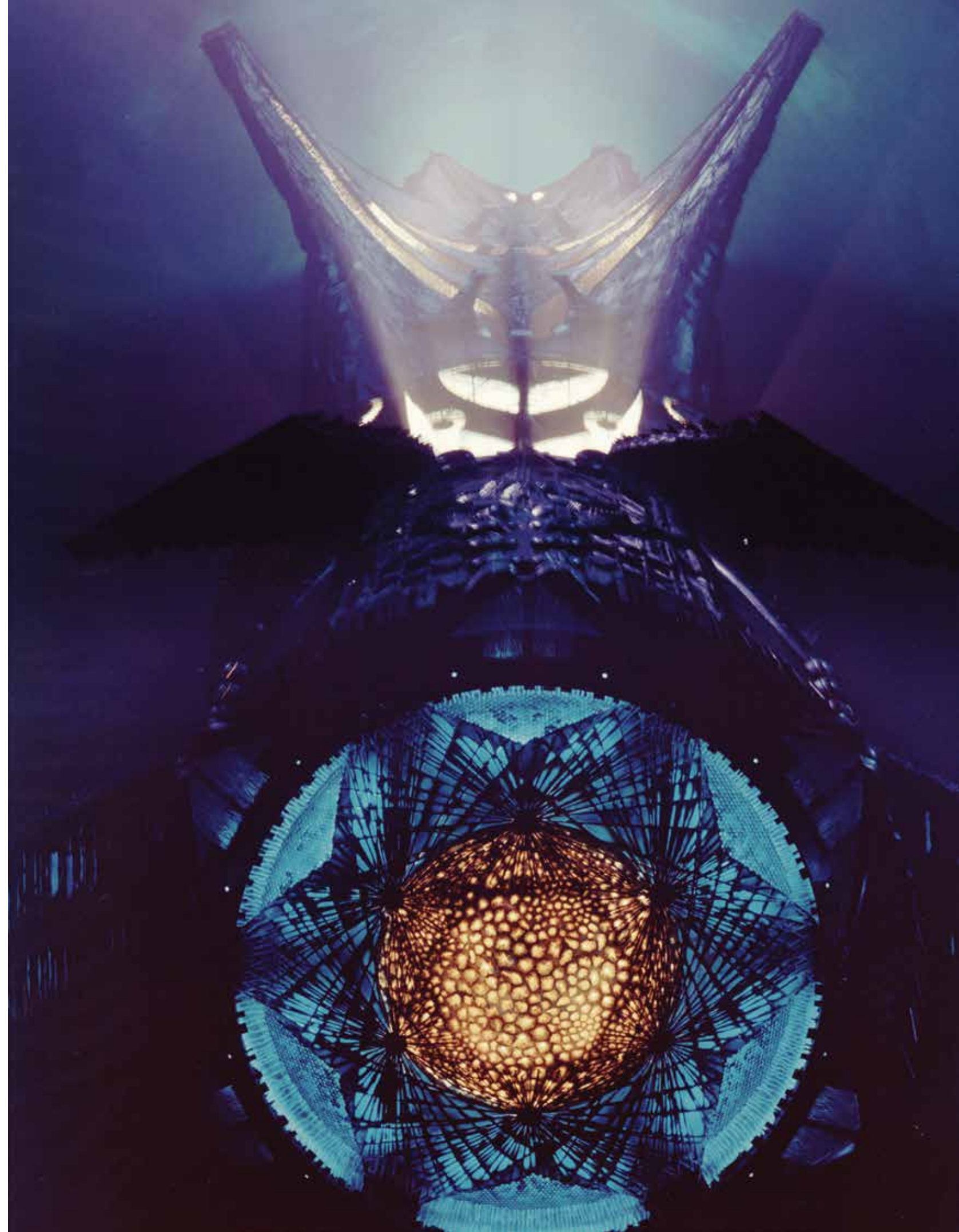
▲► Mead's concept for the rear of V'Ger, which the *Enterprise* reaches after flying the length of the extraordinary vessel. And (right) a rare image showing the full length of V'Ger that was made for the Director's Edition of the movie.

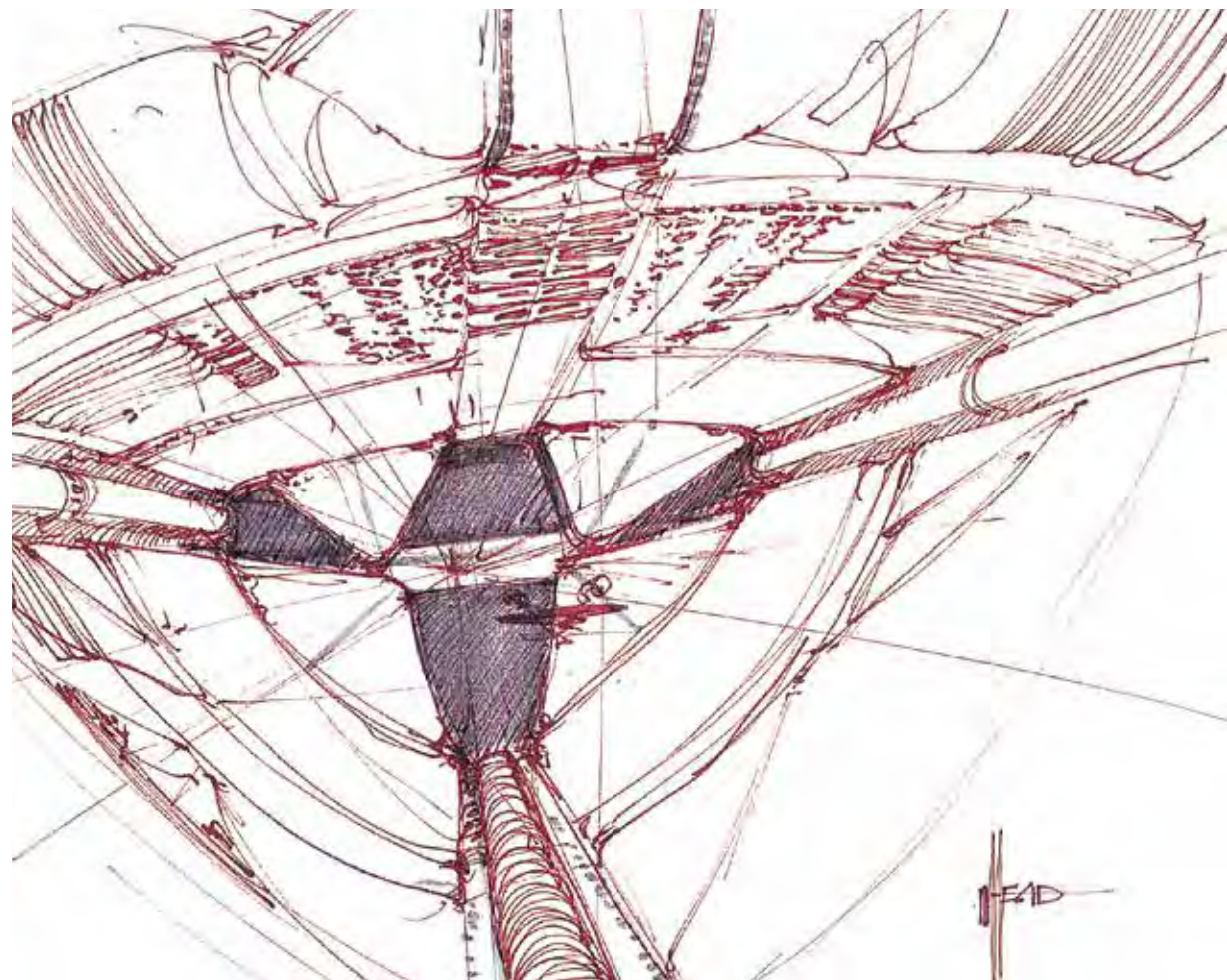
The massive alien craft around V'Ger was designed by the legendary Syd Mead, and was his first work for the big screen.

Syd Mead pulled into the Paramount lot in his Lincoln town car, a 19-foot-long, black and chrome monster that shone in the sun. As usual, he was dressed immaculately in subtly varying shades of beige, with a narrow tie and suede buckskin shoes. Once he'd parked, he

made his way to the *STAR TREK* production offices. The movie's credits listed him as a production illustrator, but Mead (as everyone called him) didn't have much in common with the movie's other artists.

Today Mead is famous as the man who designed



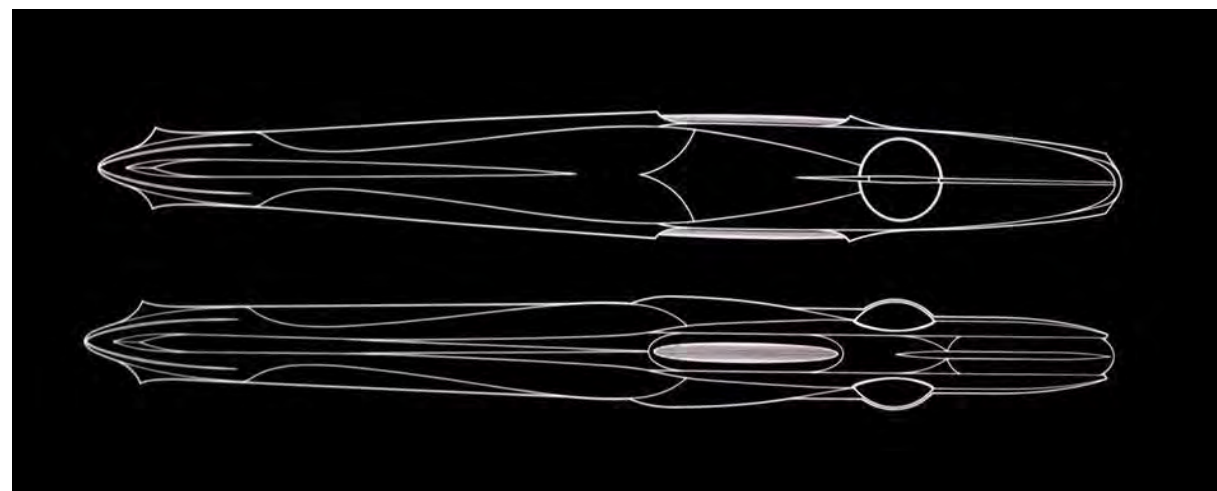


► The first sketch Mead produced showed V'Ger swallowing the *Enterprise* like a "giant tapeworm."

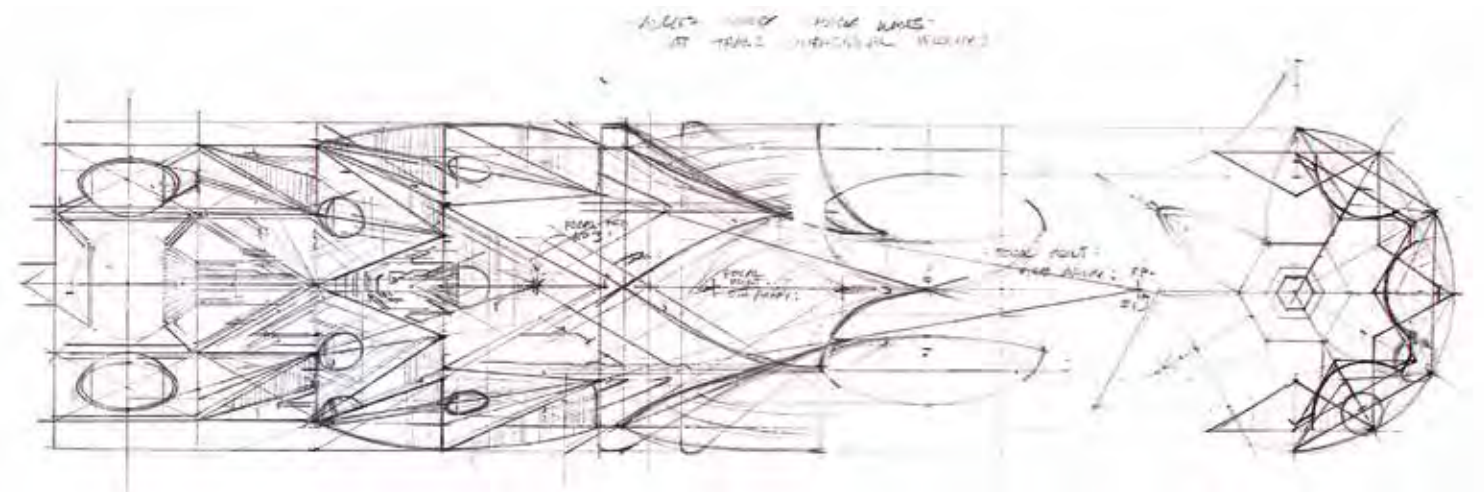
the spinner cars for *Blade Runner* and the spaceship Sulacco in *Aliens*. But in 1978 he had never worked on a movie. Instead he was one of the world's most admired industrial designers and architectural illustrators. His work for US Steel had caught visual effects supervisor John Dykstra's attention, inspiring him to ask Mead to join the *STAR TREK: THE MOTION PICTURE* design team.

Mead thought it would be a "nice side job," so he accepted Dykstra's offer.

Mead's task was to design V'Ger, the giant 'starship' that was destroying everything in its path as it headed toward Earth. He remembers that he had started work even before he came out to the studio. "In the very first phone call, Bob Shepherd (Dykstra's partner at Apogee) said, 'We



► A version of V'Ger had already been designed by the original VFX house, Robert Abel and Associates. It was long and squidlike, but would be abandoned in favor of a new design.



▲ Mead's concept was based on a hexagon which he twisted to produce a variety of interesting shapes.

got this thing coming; it's got a big mouth and it swallows the *Enterprise*.' After I hung up the phone I did this triangular sketch; I thought how cool it was to have this triangular (thing), which was sort of like a tapeworm, if you take insect morphology and expand it to a huge, huge size."

That first sketch was abandoned as soon as Mead met with Dykstra, director Robert Wise, and the movie's producers. They explained that work had already begun on V'Ger, but they weren't happy with the direction that the original effects house, Robert Abel and Associates, had taken. "Abel were going to do something with vector graphics, a kind of primitive computer animation," Mead explains. "Wise wanted something more solidly visual. When you photograph a real object, the film picks up perspective and the slight depth

of field shift, which computers have only recently been able to do.

**STRANGE CREATURE**

"I never saw the computer-generated stuff; I did see a very curious clay model which they had. It was about two feet long. It looked like this sort of stretched-out squid thing. It didn't look very impressive to me. So John said, 'Let's see what you can do.'"

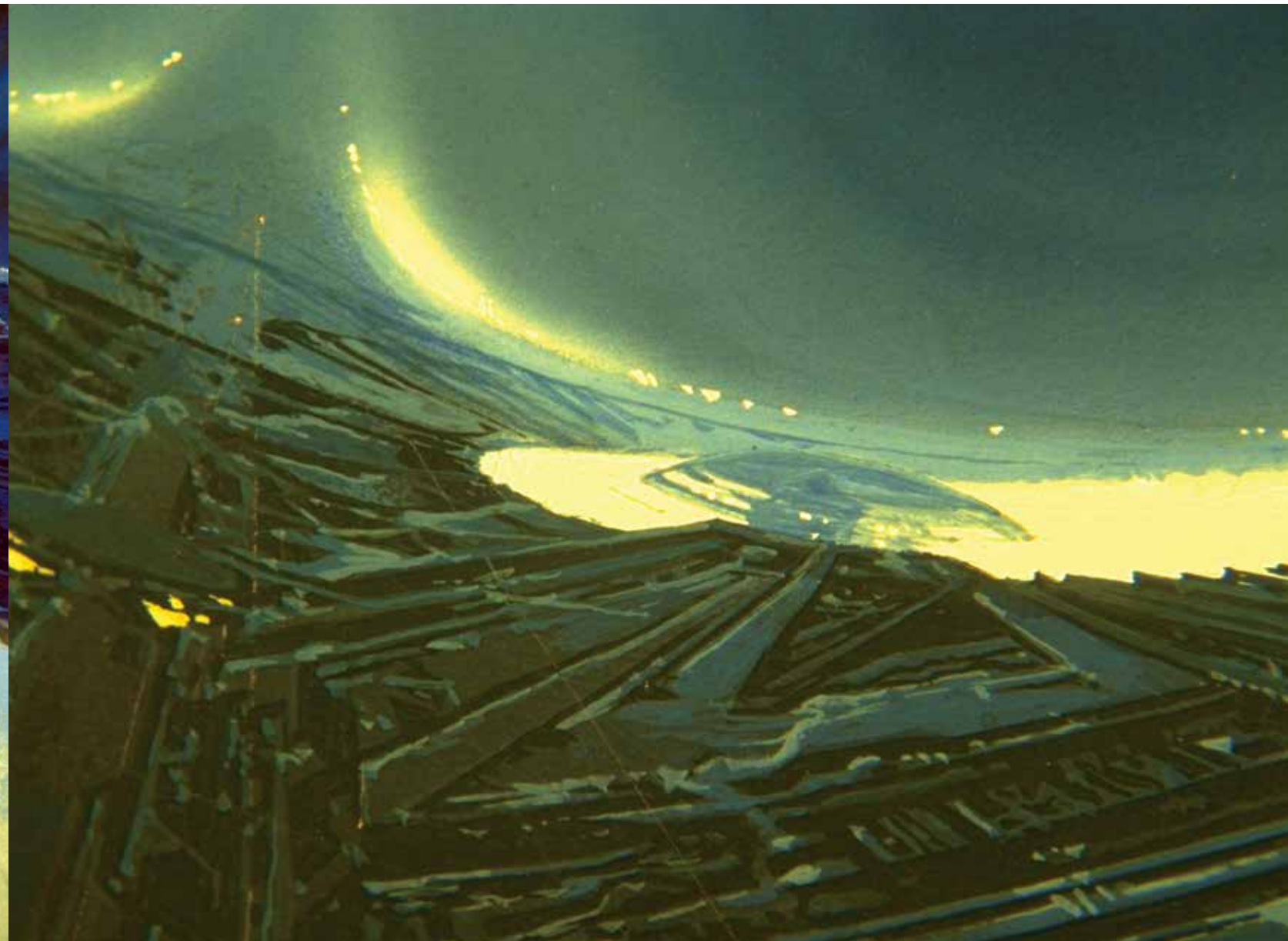
The Abel version of V'Ger only provided Mead with an idea of what Robert Wise didn't want; fortunately Trumbull - who was heading up the movie's VFX - had commissioned something that was more promising. This was the V'Ger maw, which literally swallows the *Enterprise*. It was a series of interlocking cardboard cones that rotated

► V'Ger in its entirety. The *Enterprise* approaches it from the right and flies over the top before turning around and entering through the maw on the left.





▲► Mead labelled this artwork "forward valley." The fins and walkways were all spun off the basic hexagonal shape. As the image on the right shows, Mead's artwork was closely replicated in the movie.



to create an opening, and it was designed by Ron Resch. Mead says this was all the inspiration he needed. "John said, 'Well, we got this mechanical device that Paramount had paid for.' I saw it and I thought, 'That's fascinating. This hexagon opens up as six cones revolve together. I thought, 'That's really hot.'

"So I went back to my beach house. I was thinking about this thing all the way as I was driving along; I thought, 'The secret is to keep this hexagonal geometry intact, because it is one of nature's natural composites anyway.' Then I thought about twisting it. So, using that hexagonal geometry as a section, all I did really was determine a nice proportion for V'Ger, then I twisted that hexagonal axis one complete turn

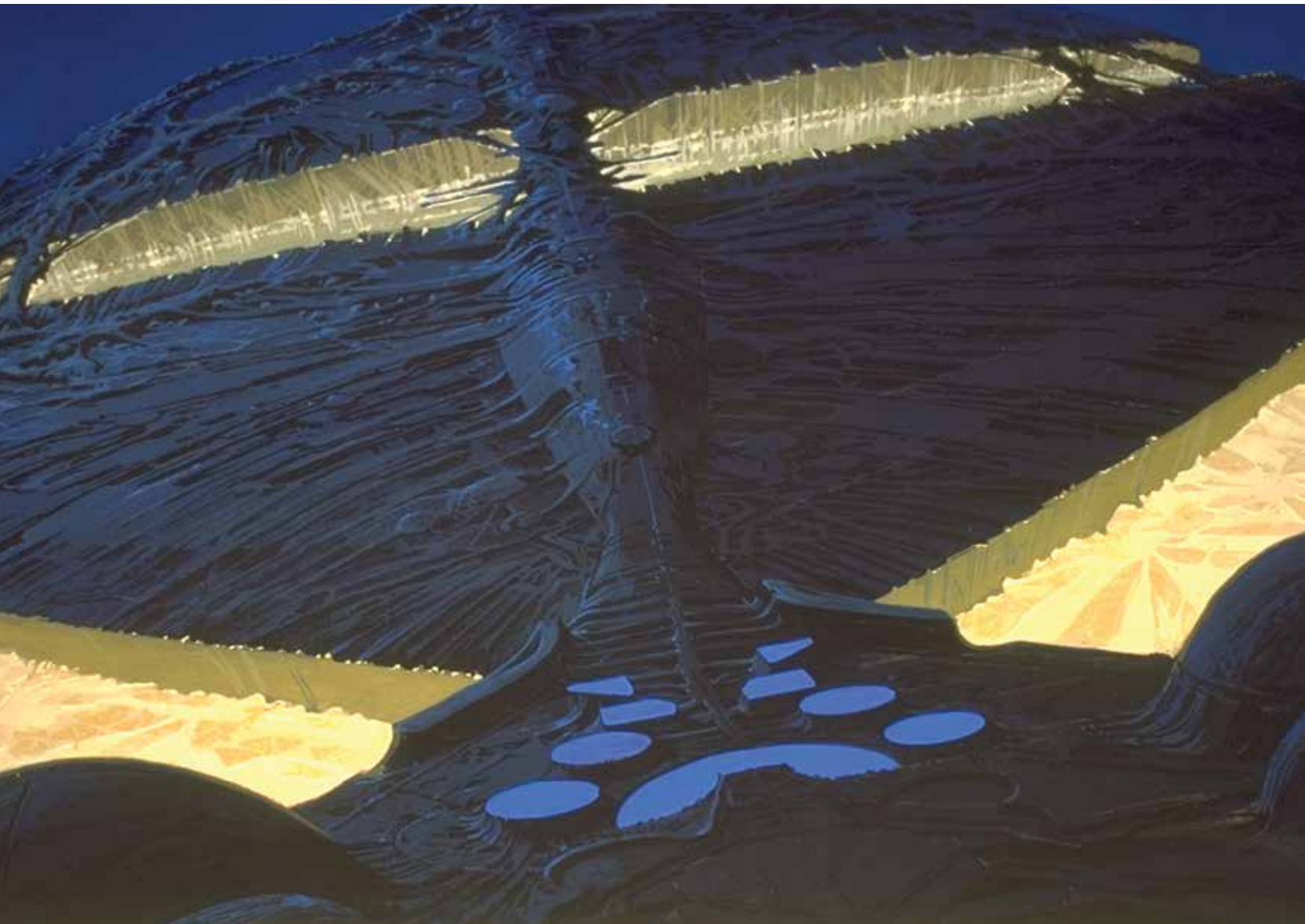
from front to back. That generated all the arches, curves, and the fins, all of that, for the design."

A few weeks after he'd started work, Mead came to Paramount for a meeting. He says that at this point he had no idea that the producers were under such incredible pressure to get the movie ready for its December release, and adds that he knew very little about the movie business.

#### WORLDWIDE POWER

"I was in a meeting. There was Robert Wise, and (producer, Jeffrey) Katzenberg, and John and all these other people. John said, 'Mead can have the sketches ready by next week.' I said, very matter of fact, 'Well, I'm leaving for Europe tomorrow.' And, they said, 'How long?' I said it

▲ Mead called this area the "power valley." It has glowing lakes of energy that indicated the vast amounts of energy generated by the mysterious vessel.



▲ In the middle of *V'Ger* there was a giant sphere, which housed the original probe that had left Earth.

would be probably a week or two. Katzenberg, without dropping a beat, turned around to some minion and said, 'Have our Amsterdam office send a courier down to Mead's hotel, pick up the sketches every other day, and bring them back here.' So I thought, 'Well, this is how it works,' and I flew off to Amsterdam. I'd work for Philips, Eindhoven all the day, then come back and do *V'Ger* sketches at night in the hotel room. Then I'd leave them with the concierge and they'd be picked up and couriered back to Hollywood."

Over the next few months, Mead continued his regular career, producing illustrations for his established clients and generating *V'Ger* concepts in his spare time, sometimes in hotel rooms, sometimes at his home, sometimes even on his lap

on an airplane; in fact, he points to one sketch that has an ink blot where the plane hit a little turbulence and he spilled his drink.

Normally, a concept artist will only produce a handful of quick sketches that can be used as an inspiration for model builders, but Mead remembers that, since *TMP* was his first movie, he produced far more than was strictly necessary. "I'm hired essentially to cook up ideas that are tailored to a very specific demand. In the movie industry you are working with people who can look at a drawing and actually know what it is. You can show them a sketch and they get it right away, then you can track in the direction everyone is happy with. I've done those kind of sketches on napkins; just with Pentel pens, as those can be



faxed because they are black and white. Then you go to the next stage, which is probably an accented shaded drawing using felt tip markers. Then, if they pay me, I'll go to full color.

"This was my first movie, and I just went ahead and did the color. I was painting all day long on other jobs. Now, because I don't paint all day long, every day, I have to get back into the synaptic brain-to-hand thing. Back then it was so fluid and easy, and I was being paid by other agencies a lot to do renderings, so I wasn't losing money in terms of the corporate income stream."

Despite the unorthodox working conditions, Mead is full of praise for the people he worked with, from John Dykstra to Robert Wise. As he explains, the vital thing was that they were very

clear about what they wanted. "The nice thing about all the movies I've worked on is that I get accurate information, which is usually the script, and a one-on-one with the director and the primaries involved. On all the movies I've worked on to date, there have only been one or two changes ever in the presented sketches. Second pass for sure you'd get it.

"The interesting thing on this movie was we had a meeting after I got back from Holland; I'd brought some sketches with me, which were the early stage of designing the surface – it's actually the part I call the valley. Because of the hexagonal geometry, I had ridges that separated the six surfaces, which were all identical. Of course, John only had to make a model of one of them. We



were sitting in the meeting. Robert Wise had seen the sketches, but it looked too mechanical to him. He said, 'It looks like a bridge or ironwork or something.'

"Robert Wise is the grand gentleman director of Hollywood. He's very quiet, and never screams or hollers like some people; he's very soft-spoken. He handed out little slips of paper from the script to remind people what we were after. The slip I got said, 'They were looking at something no man had ever seen before.' That was my job to invent that! It drove me to invent the eventual look, with the organic and mechanical combined."

#### INSIDE THE BEAST

Mead responded to Wise's request by increasing the sense of 'layering' in his concepts. As he explains, the idea was that the original *Voyager VI* was being transported by an enormous craft that had been built for it by a race of machines. "During the journey it had added to itself in some abstract rule geometry-wise," Mead says. "That's why it was a combination of organic – sort of splattered – detail wrapped over curved, warped surfaces. That was the final design."

Mead produced a number of finished paintings that showed the surface of *V'Ger* in considerable detail. Rather than simply showing the shapes and forms on *V'Ger*'s surface, they were used to show what kind of impression the enormous ship would make. When he was finished, Dykstra asked him to turn his attention to the chambers inside *V'Ger*, which were being supervised by Trumbull. Mead says that, basically, his approach was just an extrapolation of his designs for the exterior.

"I thought, 'I've got the outside, and

◀ Mead produced this vertical piece of artwork before he knew how the *Enterprise* would approach *V'Ger*. In the final movie the image was turned through 90 degrees.



obviously you'd repeat the same hexagonal geometry inside.' Reading the script, you had an entry chamber, which was apparently the largest of the chambers, then you had another chamber, and finally the sphere where *V'Ger* was docked. So I just started to design something that was supposed to be a wide array scanner and signal interceptor and gatherer. That's why I came up with the interior geometry, which was essentially, in section, a series of moving focal points for a focusing signal at one end."

In the Director's Edition of *STAR TREK: THE MOTION PICTURE* (released in 2002) we actually got to see *V'Ger* in its entirety, but in the 1979 release the audience was never given a clear idea of the overall shape. At least in part this was because *V'Ger* was so large that it would be impossible to stand far enough back to see it all. However, Mead remembers that he had actually developed a solution to this problem.

"I did a special effects shot for Doug Trumbull toward the end of post

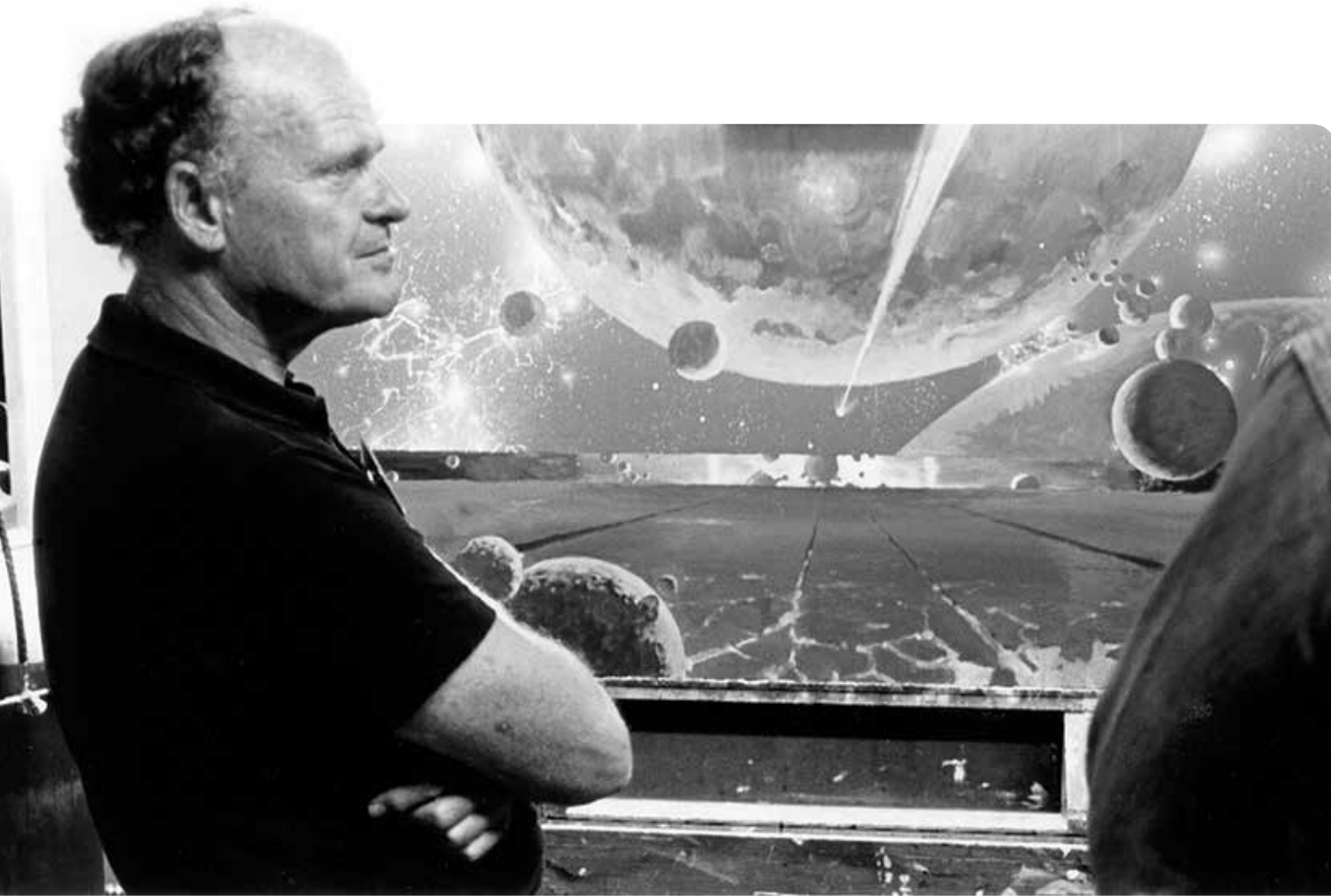
production. He said, 'Wise wants to show how big this thing is relative to Earth,' so I did a picture of *V'Ger* floating in space throwing its shadow across the surface of the moon to show how big it was." Sadly, the schedule was so tight that the shot couldn't be completed in time, and even the painting itself was lost – Mead hasn't seen it since he handed it over to Trumbull.

#### MOVIE HISTORY

Mead never worked on *STAR TREK* again – though he remembers that he almost agreed to design the *U.S.S. Enterprise* NCC-1701-D for Gene Roddenberry – but *STAR TREK: THE MOTION PICTURE* did introduce him to the movies, which have provided him with "nice little side jobs" for the last 20 years.

His work can be seen in the movies *Tron*, *Blade Runner*, *Aliens*, *2010*, *Johnny Mnemonic*, *Mission to Mars* and *Tomorrowland*. But it all began with *V'Ger* and Robert Wise's request for "something no man had ever seen before."

◀ As the *Enterprise* is pulled inside the maw, it crackles with energy, which Mead gave a cold yellow color. Director Robert Wise particularly liked this but it proved difficult for the VFX team to replicate.



## DESIGNING THE

# TRIP INSIDE V'GER

▲ Famed artist Robert McCall with one of his paintings for the journey that Spock takes inside V'Ger.

When Spock steps inside V'Ger he takes a trip through the countless worlds the machine has visited on its quest to find its creator.

While John Dykstra and Syd Mead were working on designing V'Ger's exterior, Doug Trumbull was concentrating on Spock's journey inside the "living machine." To help him develop the concepts, which needed to be visually stunning, Trumbull called upon one of the most admired illustrators in America.

Robert McCall, who died in 2010, is best known for his work illustrating the real-world space program, but over the years he had also contributed to several films including *2001: A Space Odyssey*.

It was when he was working with Stanley Kubrick that he first met Trumbull, and the two men became firm friends. McCall enormously

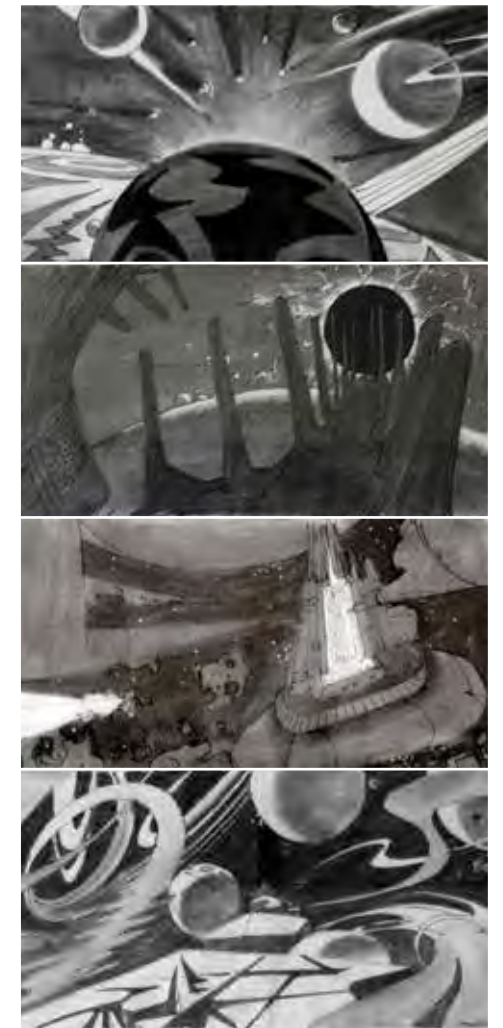
enjoyed his work on *2001*, so he was delighted when Trumbull called and asked him to join the team in Santa Monica that was creating the visual effects for *STAR TREK: THE MOTION PICTURE*. He was given his own studio on the second floor of the building, and spent three months or so working on concepts for the space walk.



"I was creating other worlds – and especially other universes – that could be part of the trip that Spock takes," he recalled in an interview conducted for the Director's Edition of the movie. "He approaches several of these doorways to other worlds, other universes. I saw the rushes each day and participated in every way that I could. I just provided

them with a profusion of ideas. It was an intense few months.

"Robert Wise would drop by from time to time, but I worked directly with Doug; he was the man I was trying to please. I knew what we were looking for, which was these entities that were hovering in space – huge, baby – they could have been a thousand miles across. The word



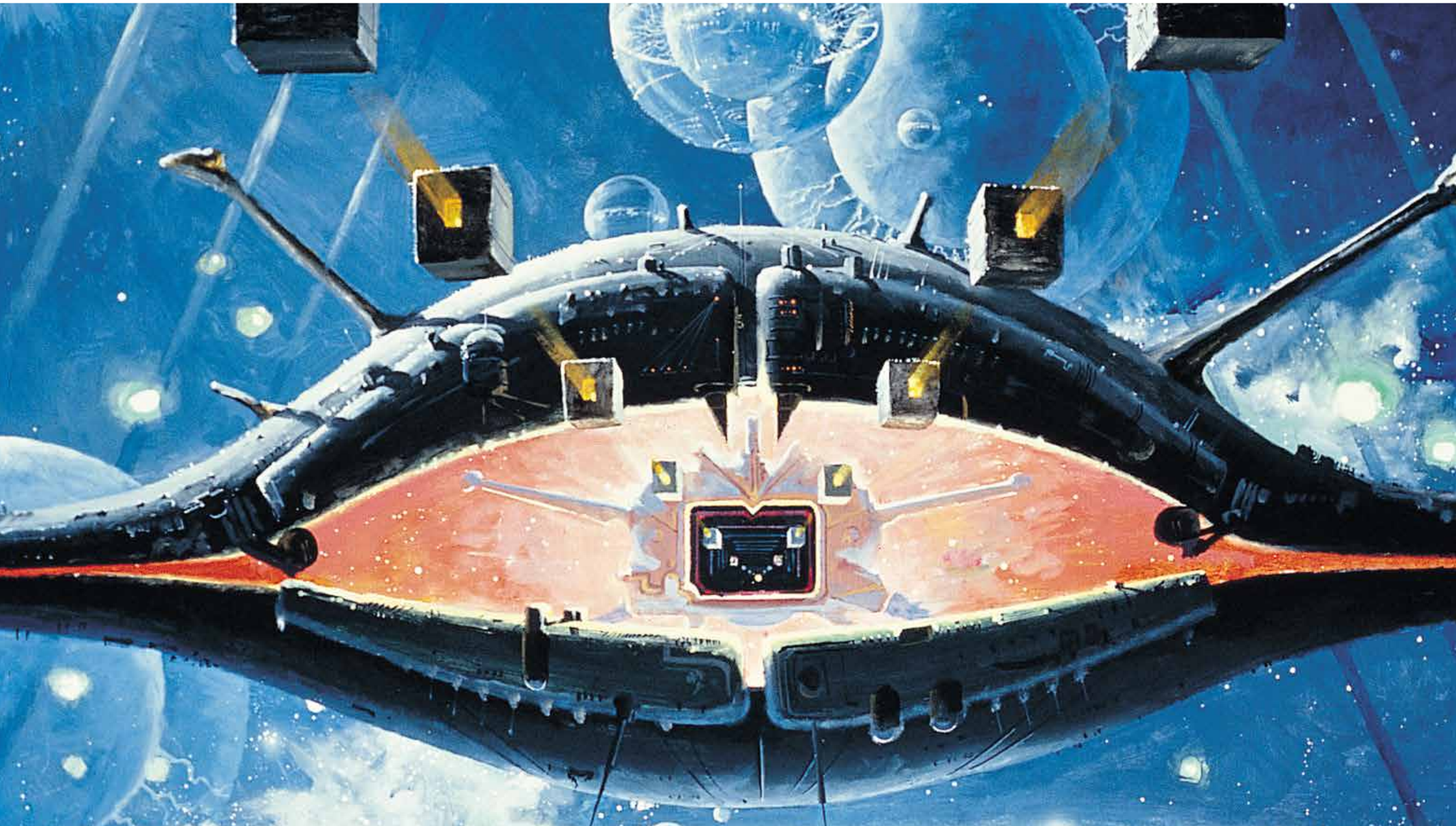
◀ McCall started by producing a series of quick sketches which he later worked up into fully developed paintings. And (left) the Enterprise inside V'Ger near the gateway that Spock will journey through.

'maw' was often used, these were the entranceways Spock would travel through to whole new universes." In addition to these 'gateways', McCall produced paintings showing the 'digitised' Klingon ships, and a massive replica of Ilia with the sphere that Spock eventually uses to mindmeld with V'Ger.

### FINISHED PAINTINGS

McCall added that he and Doug Trumbull had enormous mutual admiration for one another, and that he was determined to produce something spectacular. "I was so motivated and so anxious to create some really special and unique stuff. I think it was





aesthetically a very high level of work.”

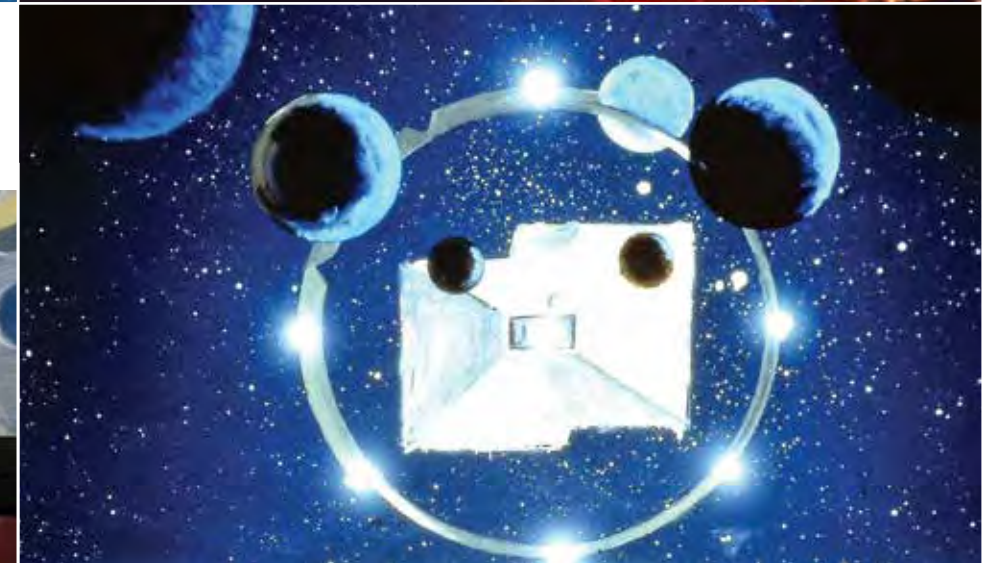
In fact, the high standard McCall was working to is quite unusual in movies. Concept work is normally generated at speed, and consists of little more than quick sketches that can be produced in an afternoon. McCall, however, created fully painted images in acrylics, two of which are now in the Smithsonian Air and Space Museum.

#### WORKING QUICKLY

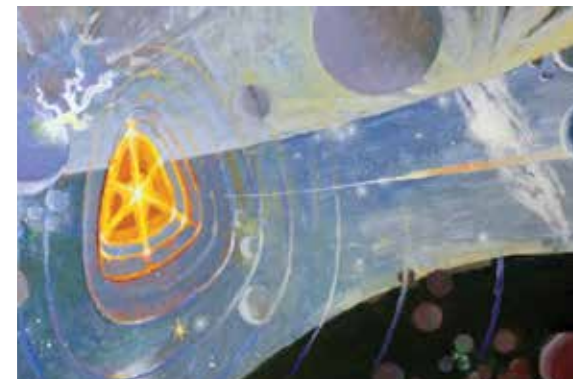
Despite this approach, he said that he worked at great pace. “They were very

spontaneous; I would spend maybe just two days on some of them. I was trying to paint in a way that would be provocative and fascinating and I was amazed at how successful – color-wise and aesthetically – they were. I had a lot of masonite panels prepared. The surface was colored: I had some that were black and some that were white, which is what I usually paint on. I had a whole bunch of them so I would always have a clean canvas, if you will, to start a new painting whenever an idea came along.”

These unusually finished paintings were intended to provide inspiration to the modelmakers, and McCall recalled that he was always careful to paint things that could actually be built. However, Trumbull was so impressed with some of the paintings that he tried filming them to see if he could use the actual paintings in the movie. Sadly, this approach proved to be impractical. “It just did not work,” McCall remembered, “because my paintings aren’t like matte paintings – they’re freer, the brush work is visible, so the only



▲▲ McCall's paintings were produced over a period of three months and show the extraordinary journey that Spock makes inside V'Ger. Many of them were closely replicated and they are almost storyboards.





way my work was used was as an inspiration for the model makers. I think two, maybe three of my paintings were actually translated into 3D models, which were maybe 10 feet from tip to tip, with a bizarre, exotic entranceway that I thought was really neat. There was one in particular that was quite close to my painting. They appear in the film so briefly that one really doesn't get a chance to see them successfully."

Given that his work spends so little time on screen, McCall said he thought that the studio might find another use for some of the paintings. "I kept thinking 'They're going to pick up these images and make some of them into posters,' but it never happened, to my amazement, because they are superb pieces and spontaneously created. I'm not being immodest when I say these are powerful images."

Many of the paintings were eventually

▲▼ On his journey Spock encounters many of the things that V'Ger has recorded on its journey, including the three Klingon ships that were 'destroyed' in the opening sequence.

▲▼ Much of what McCall designed was a series of gateways that transport Spock through different worlds inside the massive V'Ger.

published in McCall's book, *Visions of the Future*, and some of them were part of a traveling exhibit of his work. For more information about Robert McCall and his work, visit [www.mccallstudios.com](http://www.mccallstudios.com)



◀ At the climax of his journey, Spock encounters a massive, digitised record of Ilia, who V'Ger has scanned and replaced with a probe.



◀ Look closely and you will see a tiny Spock mind-melding with the spherical probe.

**STAR TREK™**

