

A composite image showing a space station in orbit. The top part shows a close-up of a station module with orange and blue components. The middle part shows two astronauts in white suits floating in space against the blue and white clouds of Earth. The bottom part shows a large, blue, cylindrical structure of the station.

**KEYFRAME ILLUSTRATION
FOR PRODUCTION**

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BRIEF 2

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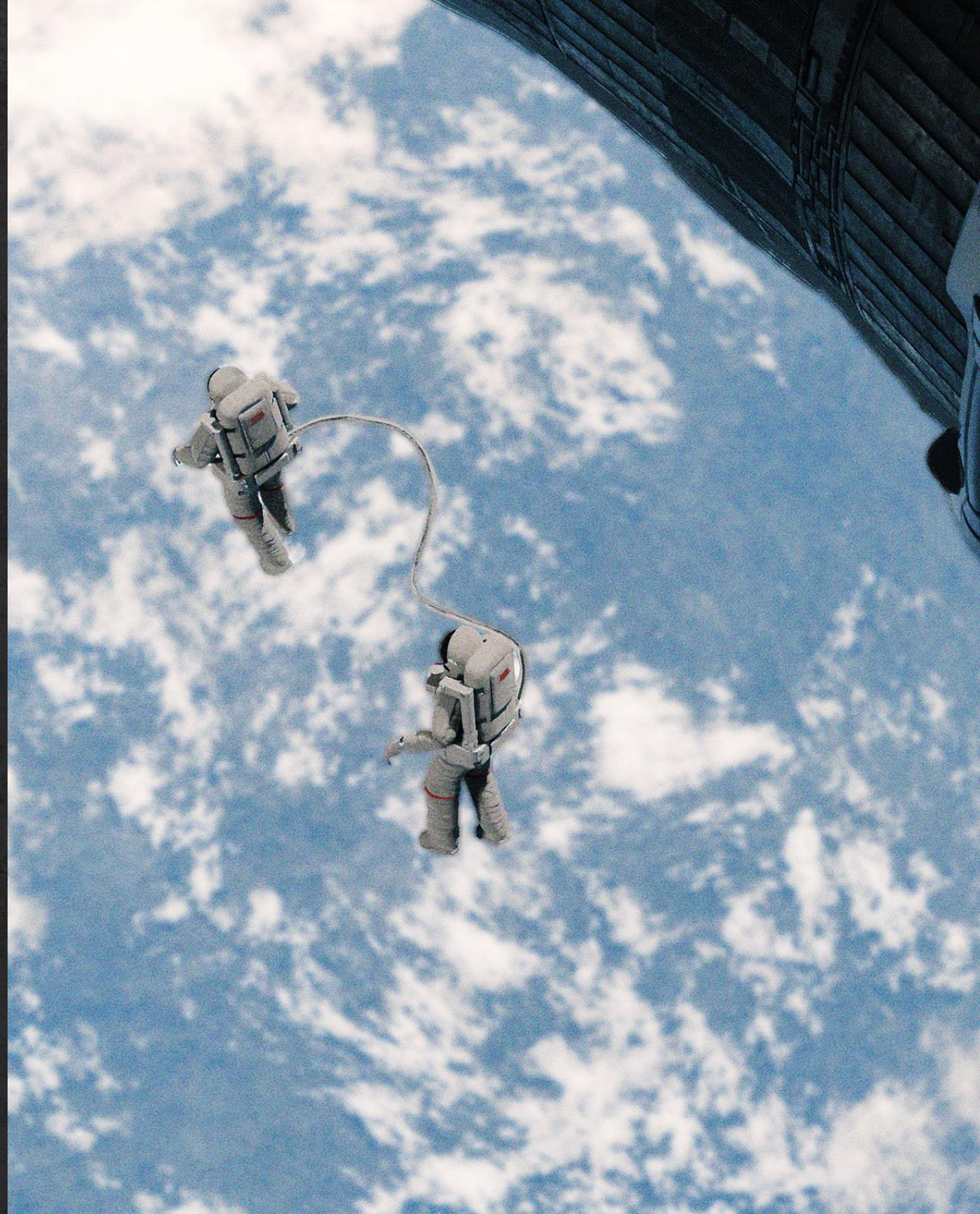
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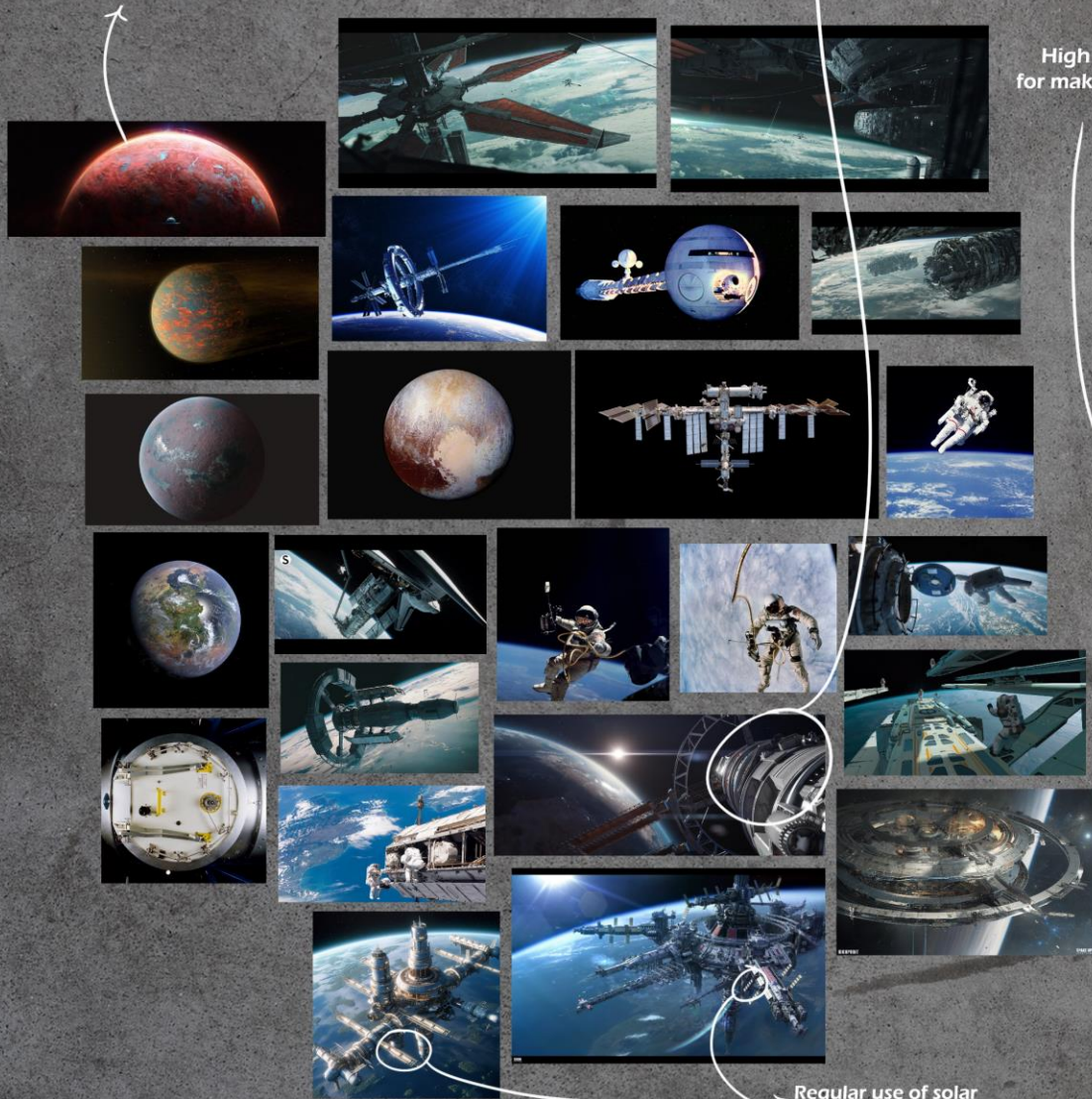
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REFERENCE AND RESEARCH

Various planet ideas for if I choose to do an alien planet



I could attach a camera to the ship in blender for a unique shot

High focal length is good for making things feel huge

Space movie shot reference



Bright lens flares

Could show the scene in reflection of visor

Wide shots to help show the scale of the ship compared to the station

Over-shoulder shot

Regular use of solar panels on designs

I gathered reference for existing concept art of spacestations and spaceships to help influence my design

KEYFRAME PLAN

I first decided what brief to choose, brief 2 stood out the most to me as I have wanted to complete some artwork including a mega structure and thought this would be appropriate.

Before starting anything, I completed a rough plan of how many key frames I wanted to do and what each frame would contain.

To make things easy and more efficient I just photobashed these keyframes using existing photos and artwork I found online.

I was also starting to think about what type of shots I wanted to use to make each frame different and create a cinematic feeling that would feature in a film

Finally, I also decided on the aspect ratio I would use. As I chose the space brief, I thought I super wide aspect ratio would best suit the vastness and scale of space.

Frame 1 - Close up showing spaceship floating through space with planet in the background



Frame 2 - Long shot of huge space station and the previous spaceship next to it for scale



Frame 3 - Super long shot showing most of planet and the space station tiny



This will be an alien planet rather than Earth



Frame 4 - Through the window of spaceship shot showing the approach to space station



Frame 4 could potentially be removed as frame 5 is similar



Frame 5 - Shot showing two astronauts tethered together in foreground with space station very close through an exit hatch



I could add a frame between 6 and 7 showing a shot of the astronauts boarding



Frame 6 - Long shot of astronauts crossing from spaceship to the station via space walk



I was thinking that this frame could be changed to a birds eye shot instead for better variation



Frame 7 - Over shoulder shot of astronauts opening a long sealed door on after boarding

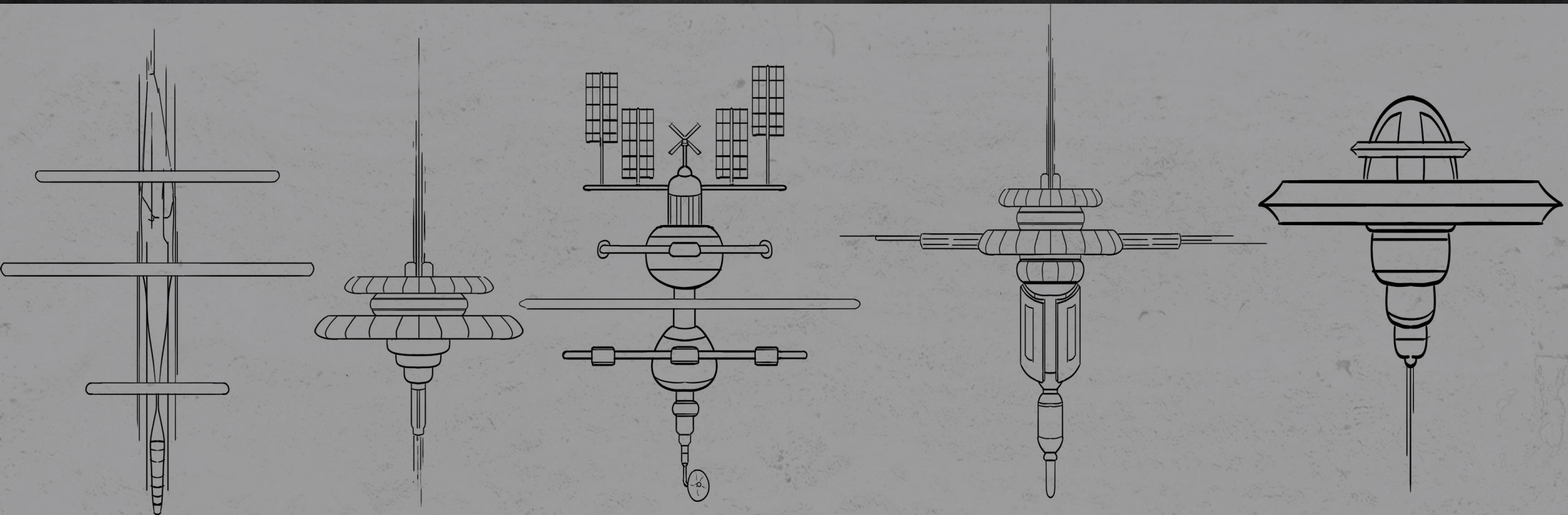


Frame 8 - Close-up on astronaut's visor showing freeze-dried body in the reflection

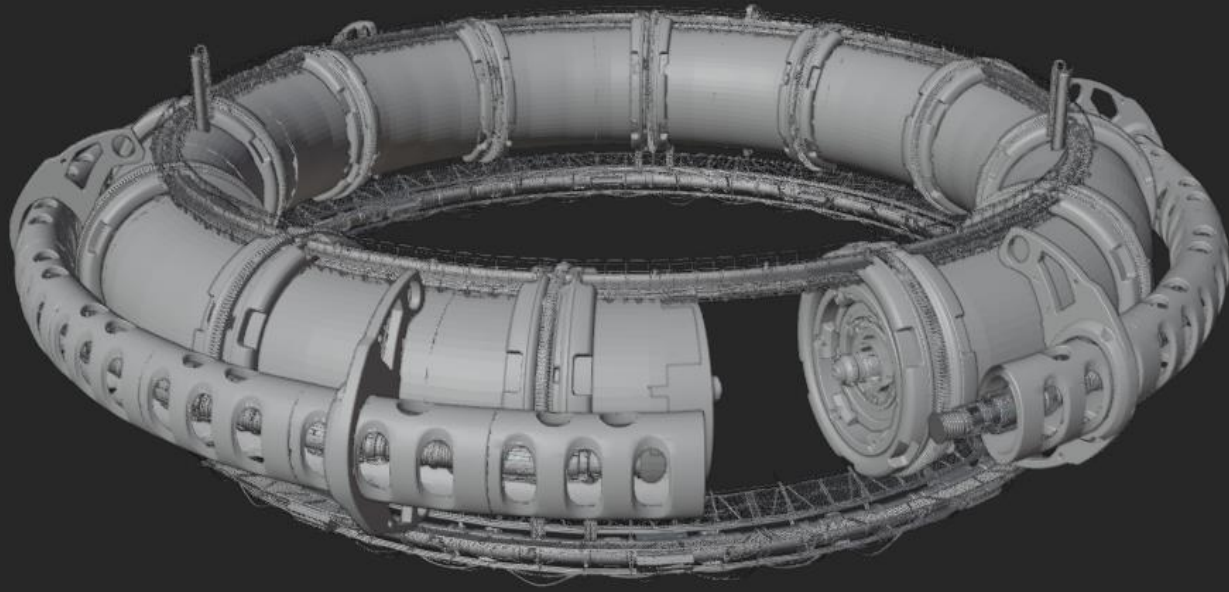


SPACE STATION THUMBNAIL SKETCHES

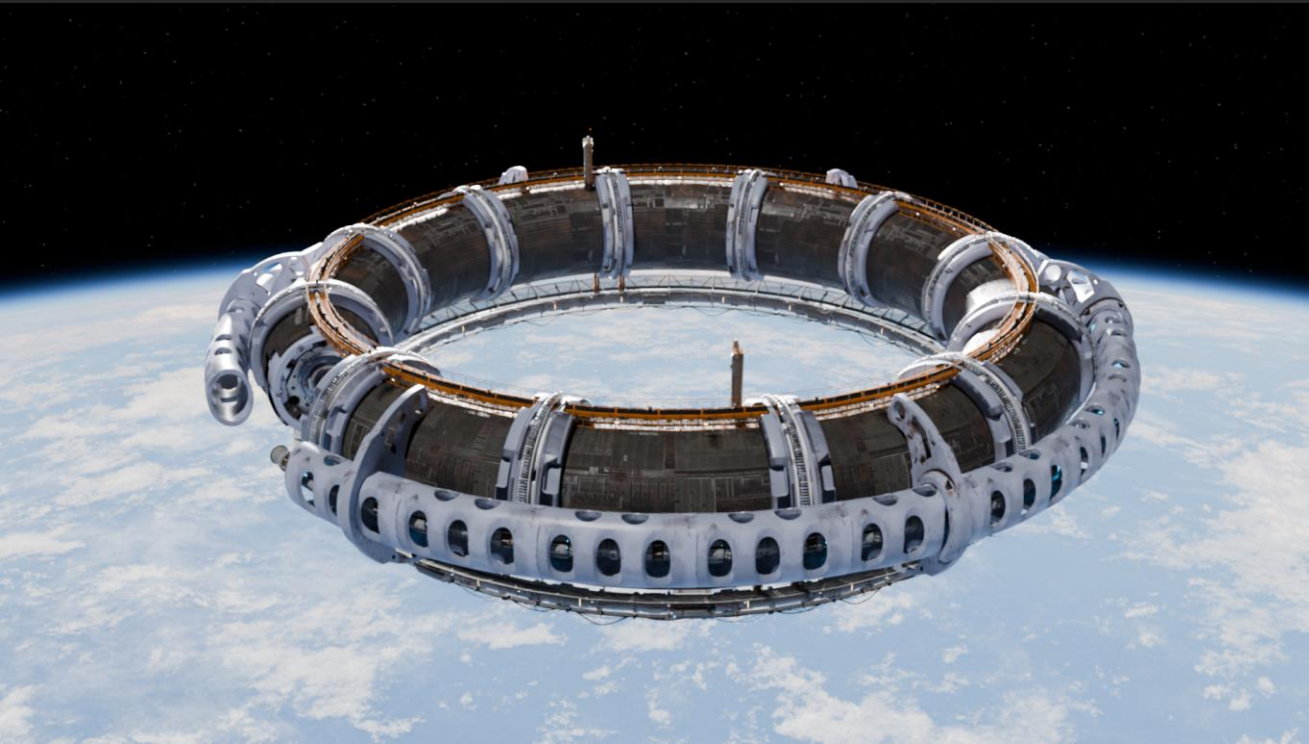
Before moving into Blender, I wanted to start designing what the space station would look like. I did these 5 thumbnails before receiving feedback suggesting I do any design iteration in Blender instead as the asset design wasn't the primary focus for this module. However, it still proved useful as it gave me some basic ideas for when it came to building the model.



KITBASHING THE SPACE STATION

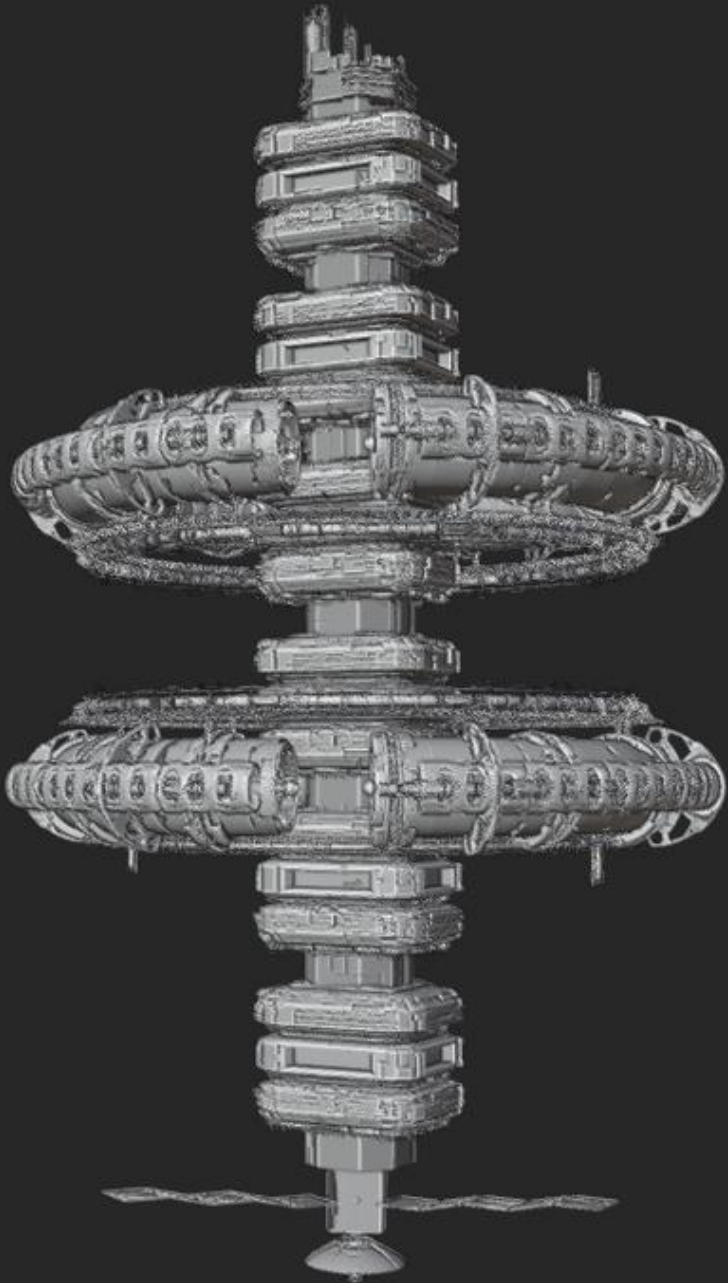


During this module I was introduced to kitbashing for this first time, and I thought this method of building a 3D model would be perfect for quickly creating both the spaceship and space station. Using different parts from kitbash sets and editing and arraying it in Blender, before texturing it Substance Painter. I first created the ring that would surround the central pillar.



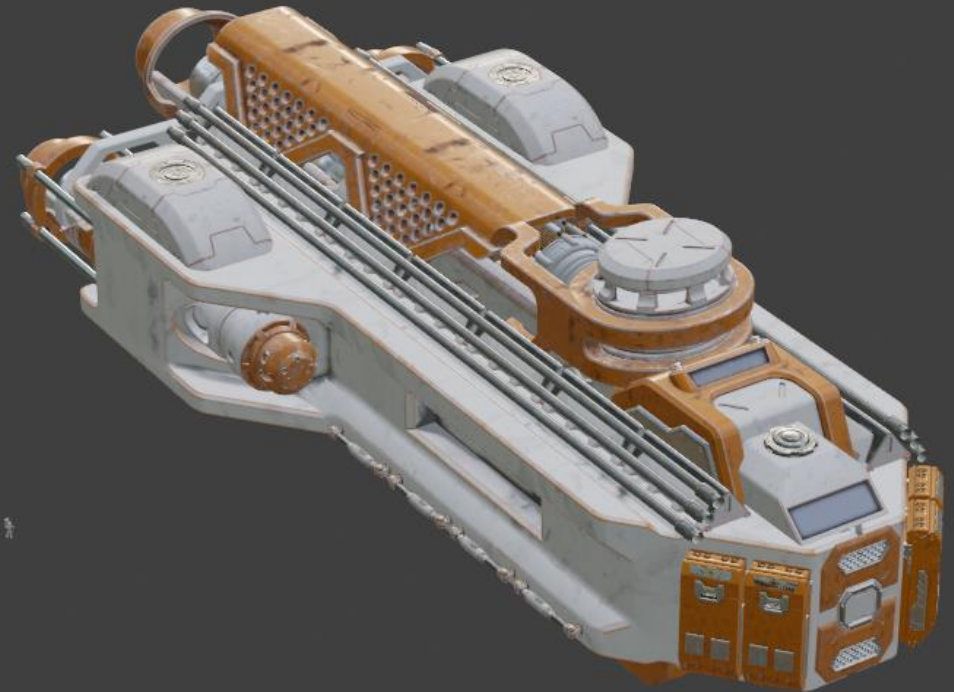
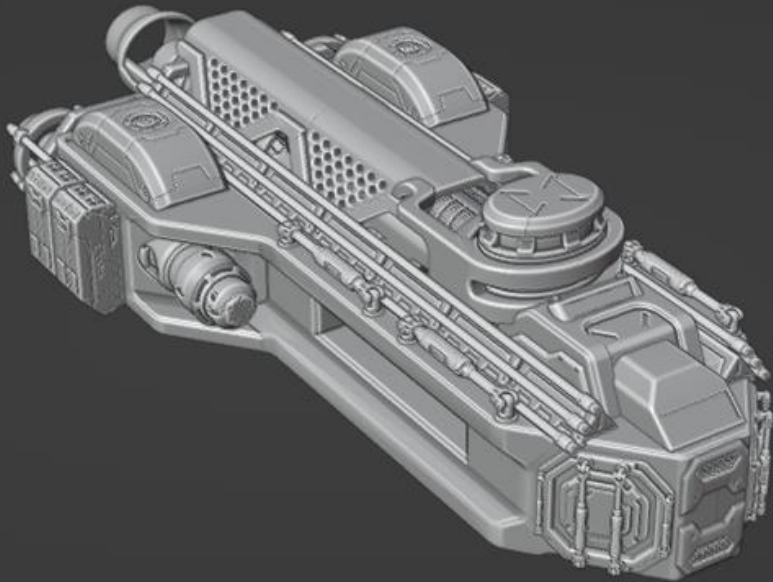
COMPLETING THE SPACESTATION

After making the ring I could instance and mirror the mesh to create a duplicate. Before creating the central pillar with multiple hangars where spaceships would land. I did struggle to make the spacestation look abandoned as I couldn't cover it in dirt and muck as those elements don't exist in space. I added a break in the rings to help suggest the abandonment. However, I planned to achieve the look better with lighting effects that I would later add in photoshop.



MODELLING THE SPACESHIP

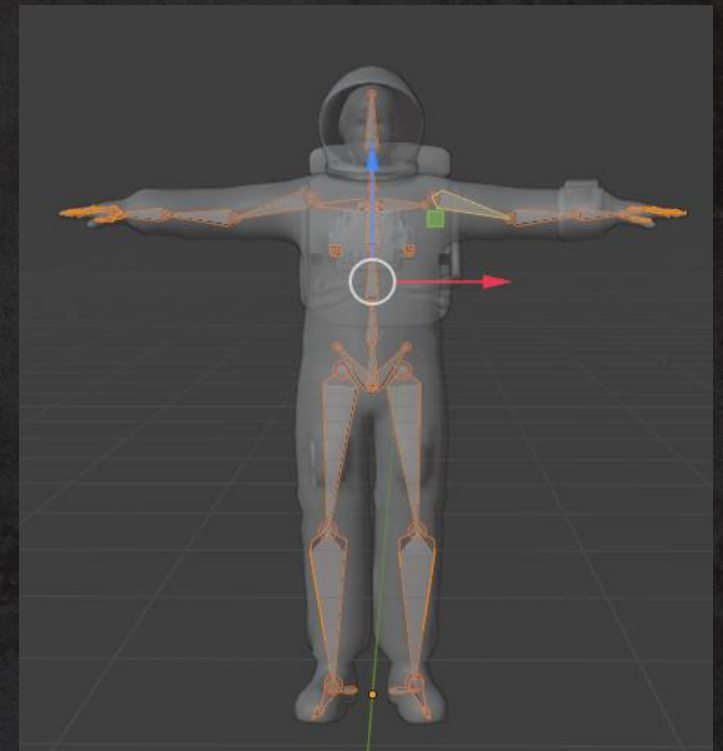
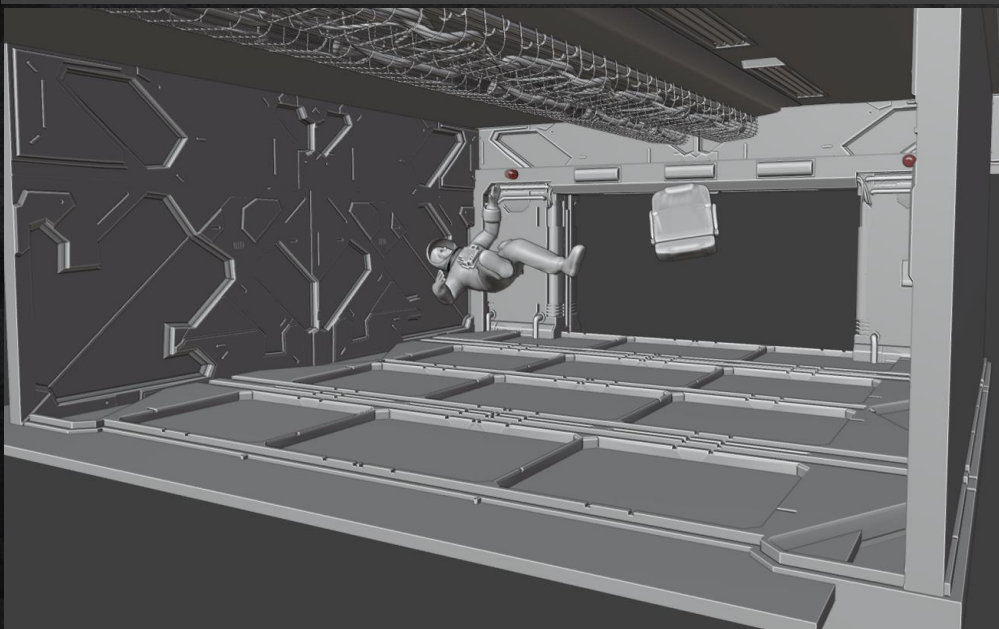
Using the same kitbashing method used for the spacestation model, I next modelled the spaceship. The flat image (Bottom left) shows my original design, and the rendered textured versions are the final design with the changes made based on feedback received. Which was that the design lacked a focal point and there wasn't enough empty spots to redirect the eye of the viewer. I attempted to remedy this by having most of the detail on the top and front of the spaceship as well as colouring these areas in orange. The focal point was then further enforced in the render by adding a light in the cockpit.



MODELLING THE INTERIOR

Now all the exterior models were made I could move my focus to the last two keyframes, which would take place inside the space station. I next modelled a corridor based on what I imagined the interior of the space station would look like, before adding the two astronauts to the scene.

For these scenes I needed the astronauts in a specific pose, so I attempted rigging for the first time. I added a human rig using the Rigify blender add-on and parented it to the astronaut mesh so I could pose it into the position I wanted it.

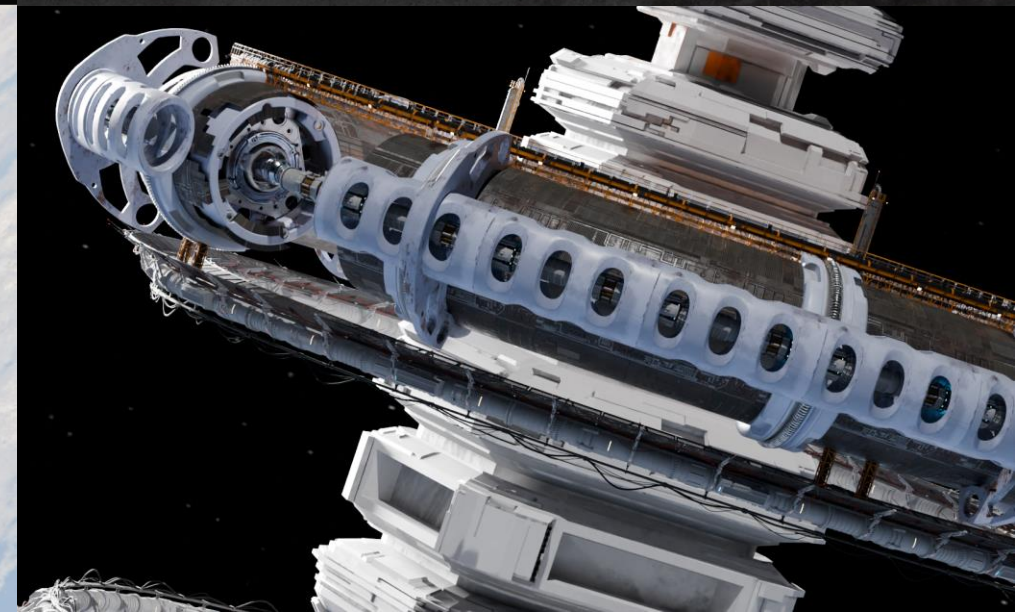


RENDERING THE APPROACH

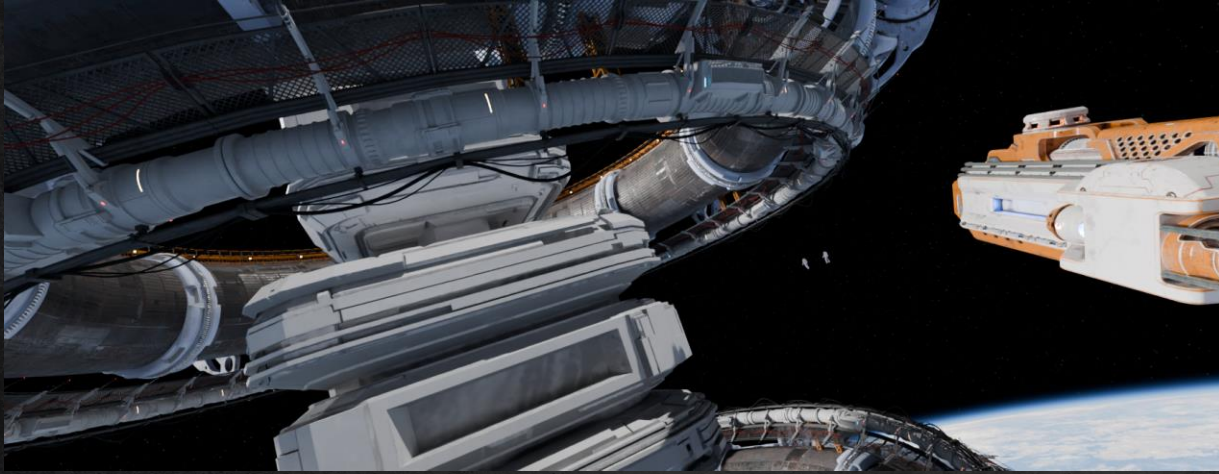


Now all the modelling was complete for the exterior shots I could start getting the renders I needed. One of the reasons I wanted to complete this module in 3D was so I could experiment with the camera angles freely.

I wanted to show the spaceship approaching the station while also showing the massive scale of station by using a high focal length in the camera settings in addition to having the already large spaceship look tiny in comparison to the station.



RENDERING THE CROSSING



The next set of renders to get was the crossing of the astronauts from the spaceship to the spacestation. These renders were also very beneficial in showing the scale of the scene as you could compare the size of a person to the spaceship and spacestation.

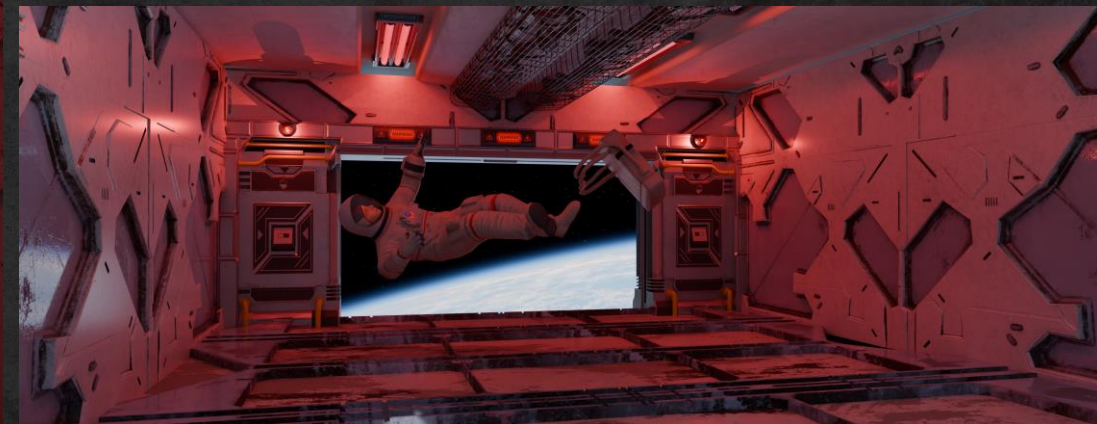
For the astronauts in these scenes, I used an animated Sketchfab model of an astronaut floating in space. I paused the animation of each astronaut at different points and placed them in the scene with plans of painting the tether between them later in photoshop rather than modelling it in Blender to save time



RENDERING THE INTERIOR

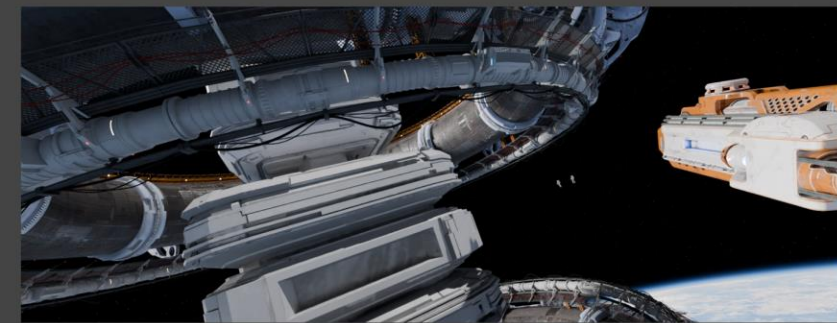
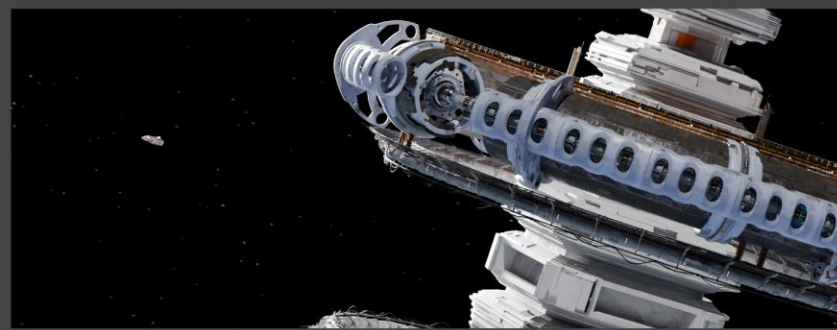


Now the interior was modelled I could get the final two renders I needed. I lit the room with low lit red lights to suggest emergency backup lighting. I then changed the material on the astronaut's visor to be fully reflective, so it reflected the air lock room showing the body floating in space.



RENDER STORYBOARD

Now all the renders were completed I could compile them into the storyboard to make sure the story is readable before painting over the renders.



PAINT-OVERS

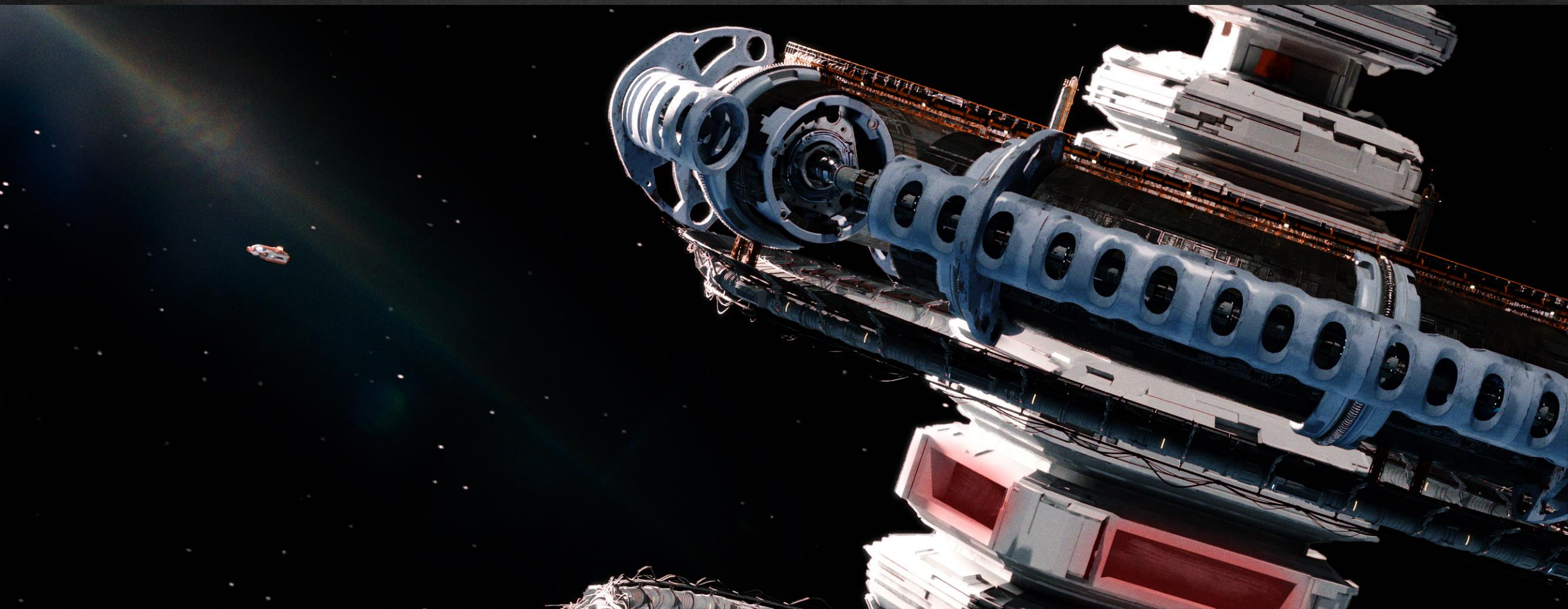
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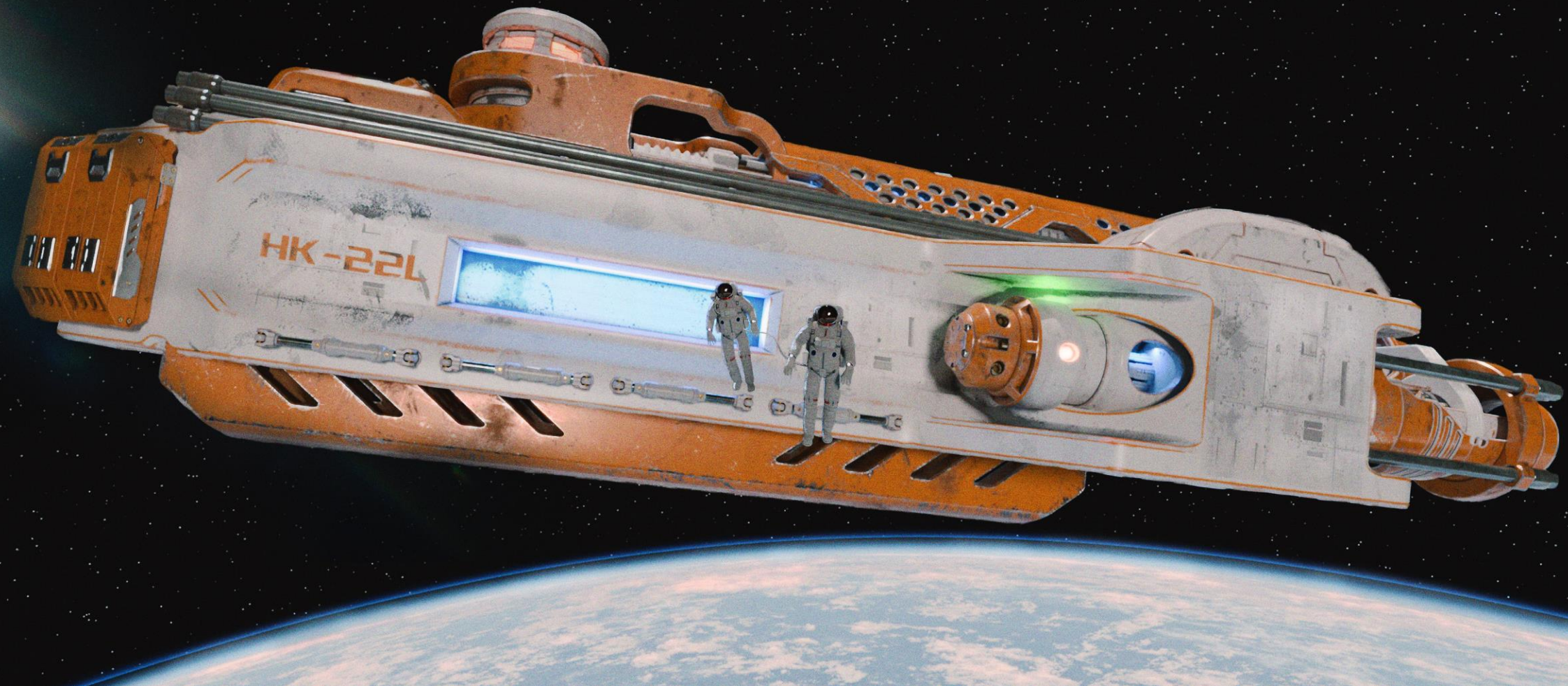
KEYFRAME 2:



KEYFRAME 3:



KEYFRAME 4:



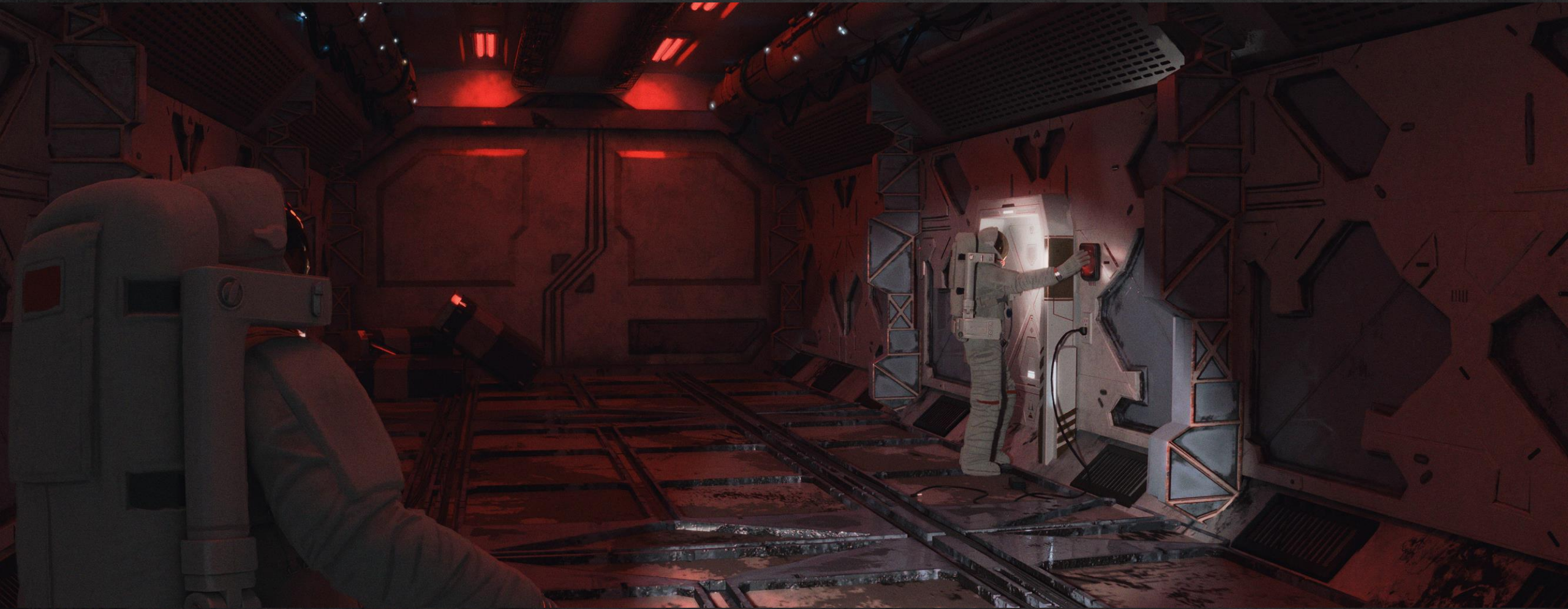
KEYFRAME 5:



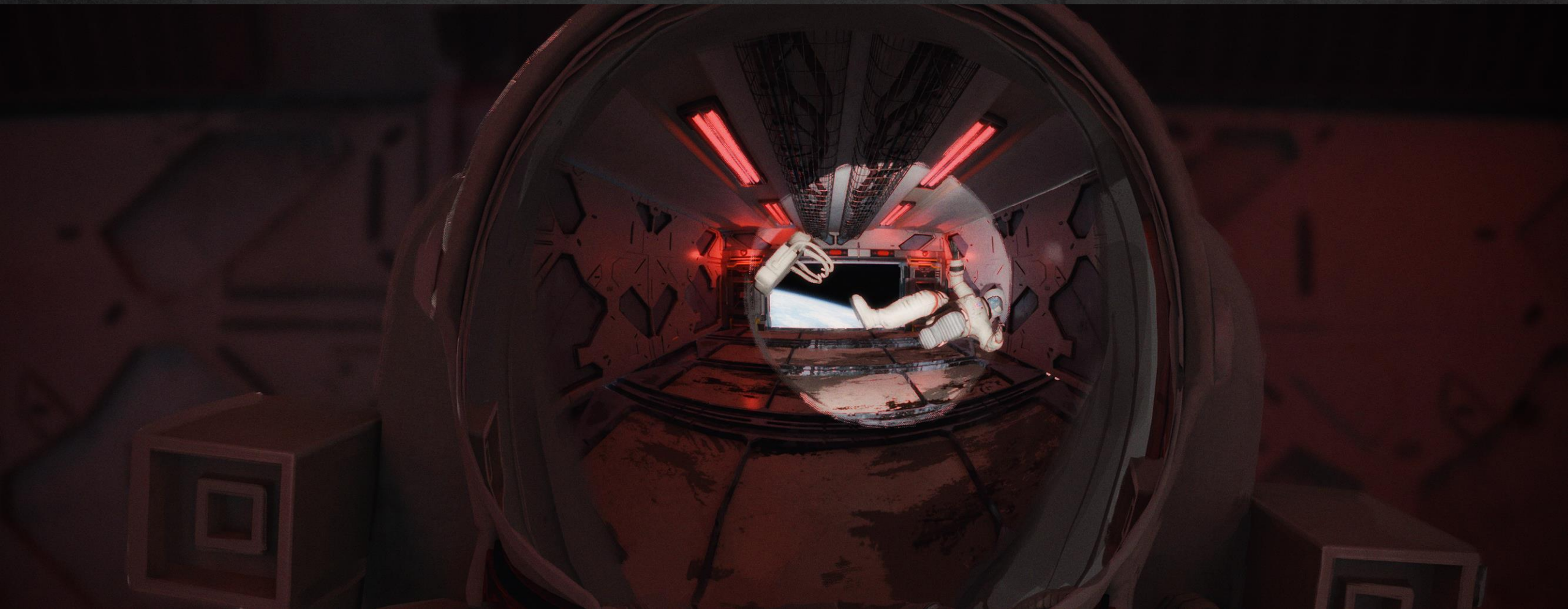
KEYFRAME 6:



KEYFRAME 7:

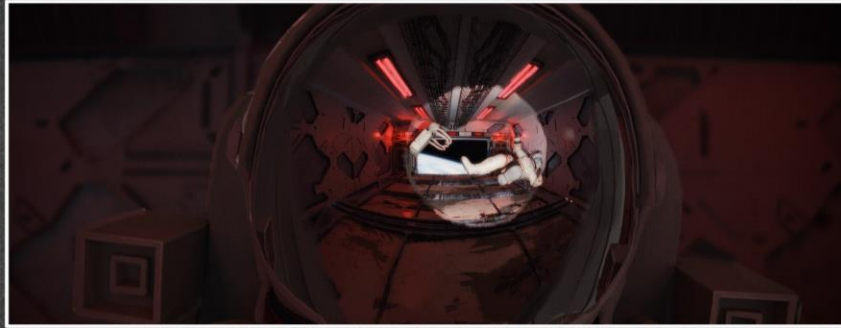
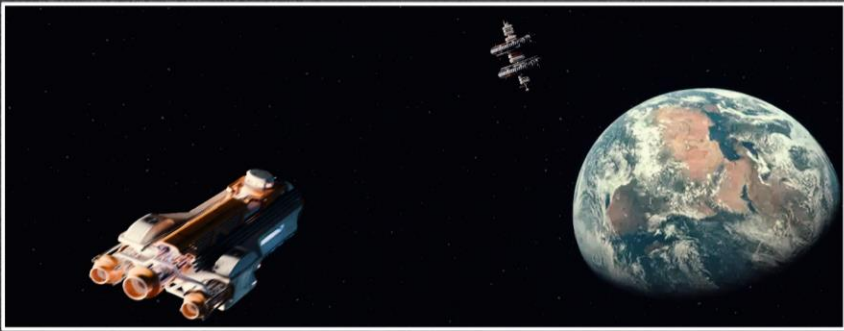


KEYFRAME 8:



KEYFRAME STORYBOARD

The final keyframes
all compiled into a
cohesive story
board



CONCLUSION

This assignment has been one of the most enjoyable I have taken during my time at University, It has allowed me to practice and improve my current knowledge and skills, specifically using 3D, as well as giving me the opportunity to learn new techniques that will better my work further.

I feel the project was largely successful in completing 8 keyframe illustrations, which is more than the minimum required of the brief, and at a standard I am very happy with, all achieved in a short timeframe, compared to previous modules.

If I was to do this assignment again or change anything, it would be to complete more thumbnail and preliminary sketches to have a more concrete vision of my keyframes before going into Blender. I did almost all my experimentation and iteration inside Blender, which worked fine. However, I feel I could have really pushed the boat out with some more extreme shots if I had taken more time to plan each shot and research further into cinematography.

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