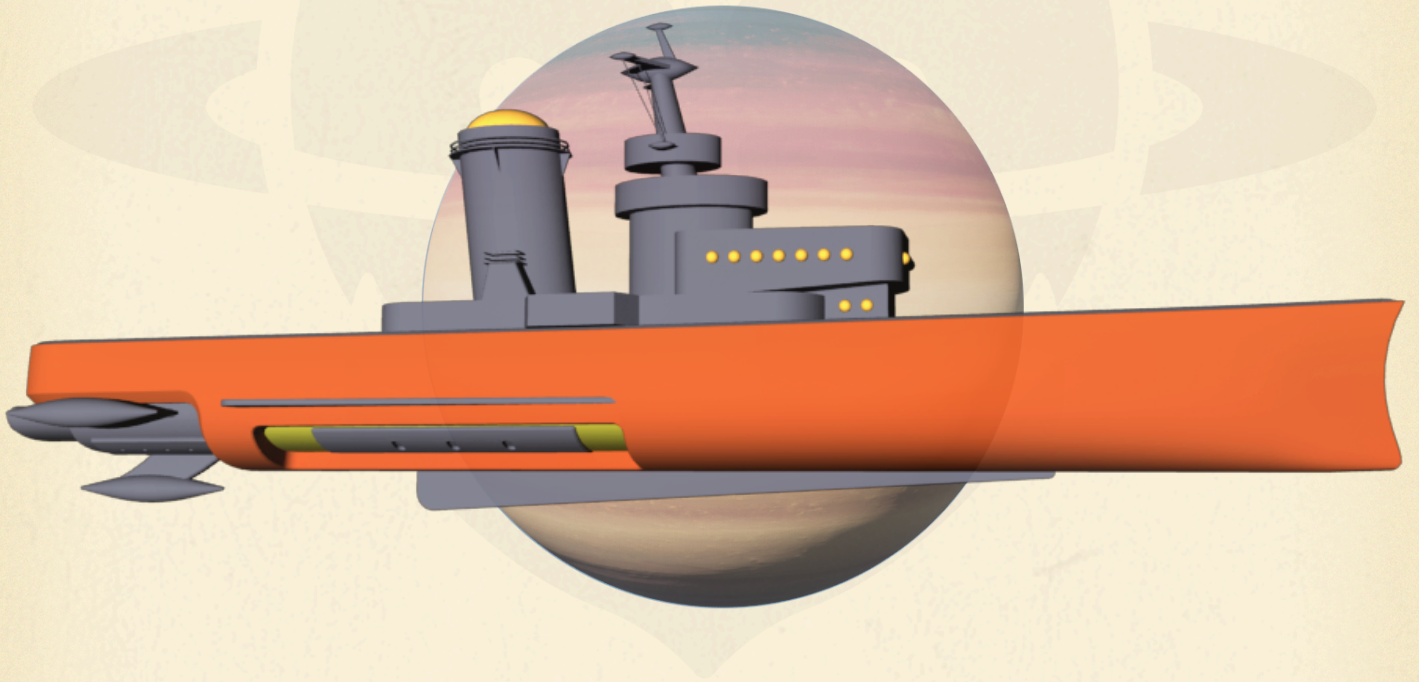


# Saturn

*A prototype Capstone Level*



*Gerrit Pottmeyer, Team 08, Sprint 10*



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# Overview

## Summary

Saturn takes place around a ringed space station anchored to the small moon of Volla 7, with three squadrons of enemy patrol vessels maneuvering around asteroid fragments of varying sizes. When the player starts the level, they are immediately presented with a near straight path forward between asteroids towards the station. Between these asteroids are several scattered auto and railgun turrets. By carefully piloting around the largest of these fragments, the player must destroy each turret to finish the mission. While optional, destroying the patrol vessels in the level will provide more spaces for additional cover during combat.

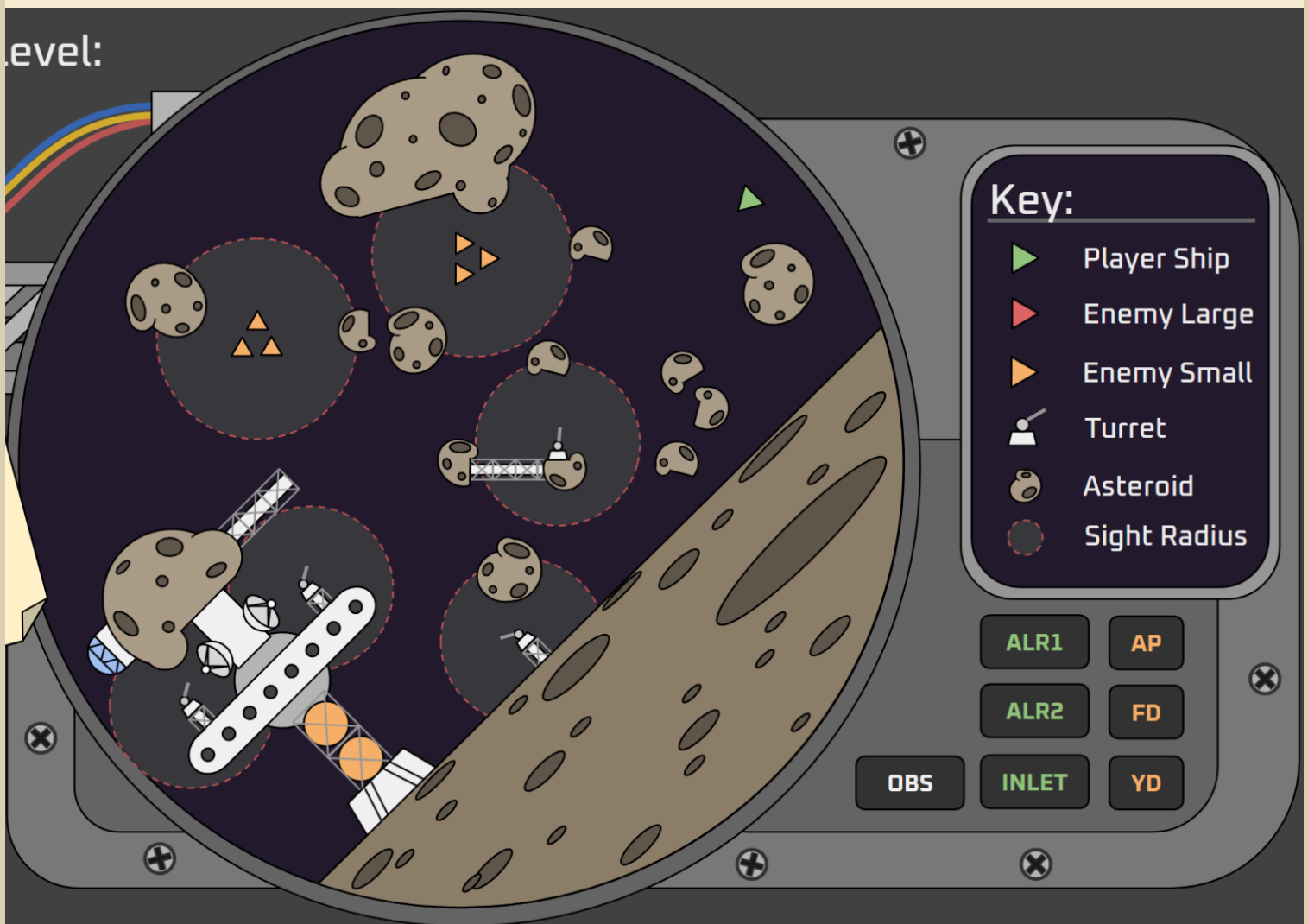
## Setting

Our intelligence operatives have discovered the location of a heavily fortified Anchorage station on the far side of one of Volla 7's small moons. Turret fortifications and small patrol squadrons surround the anchorage, and it's your job to clear them out. While your new vessel could destroy the facility, we cannot risk letting one of our latest prototypes fall into enemy hands. Take out those fortifications before reinforcements arrive, so our squadron of heavy frigates can eliminate the station successfully. Good hunting captain, and godspeed.

## Mood

Saturn is designed to be a mix of moderately-paced combat and strategy. The player should feel as though they are narrowly dodging attacks and outmaneuvering their opponents, while also able to take a more relaxed strategy from hiding behind the large asteroids, and ambushing their pursuers. With the auto turrets, railgun defense posts, and patrolling enemy vessels, the player has multiple different ways to fulfill their objective, all while increasing their score from defeating enemies.

## Map Overview



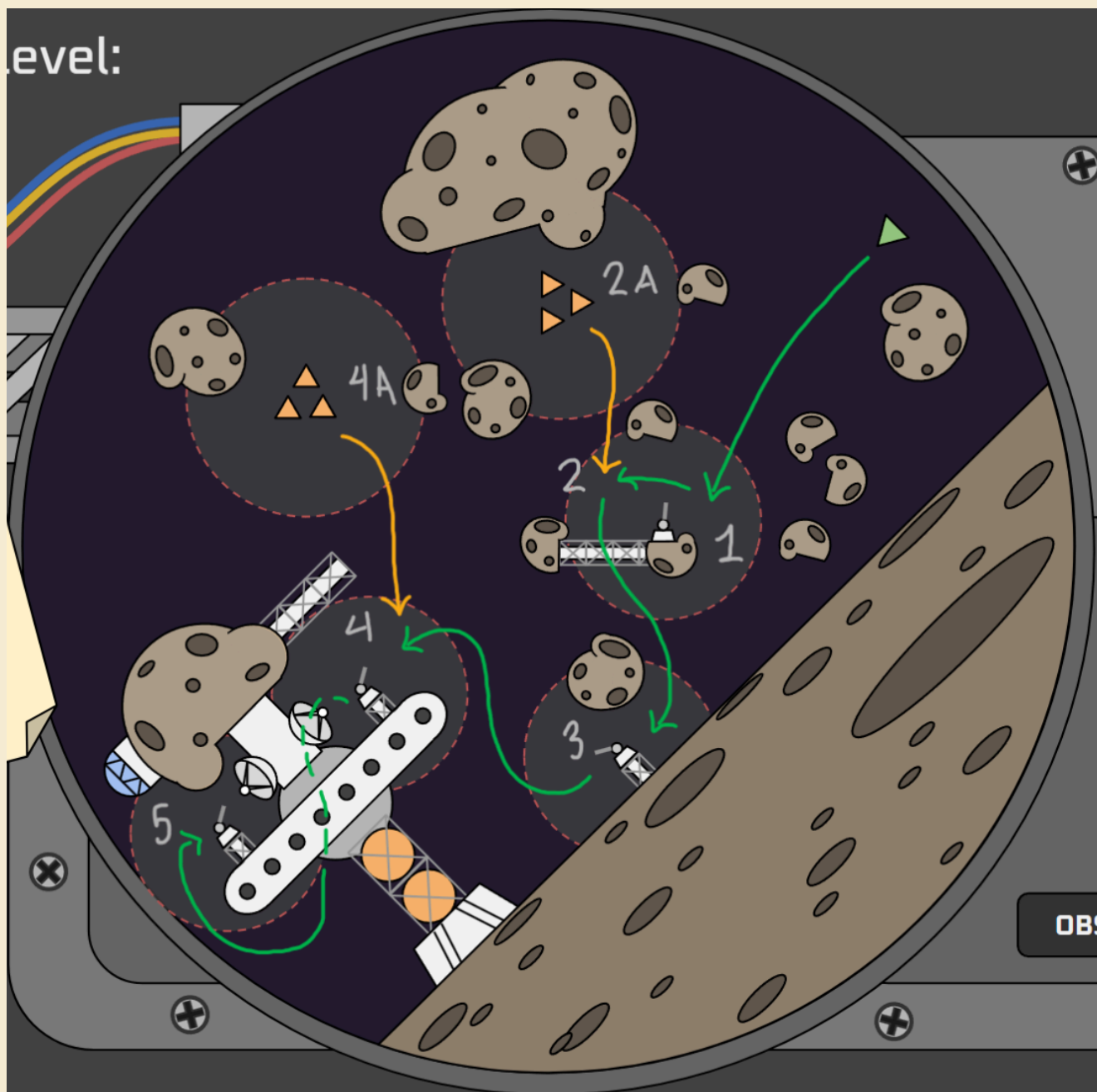
### Objectives

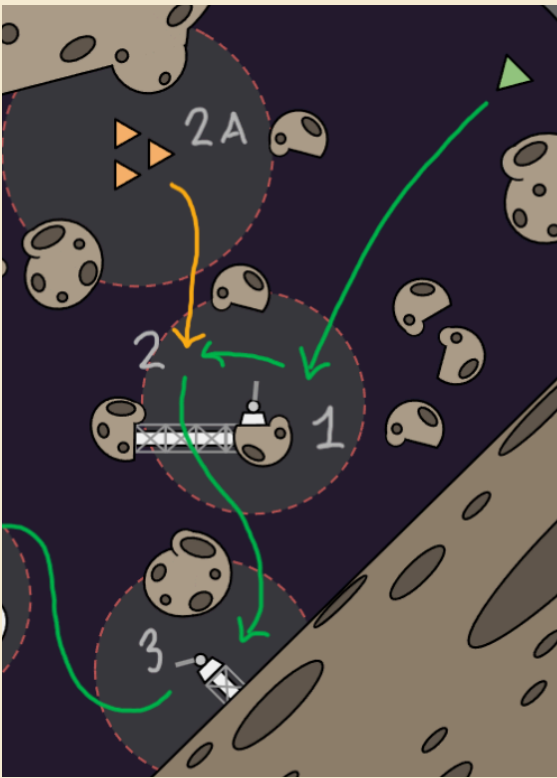
The main objective of Saturn is to destroy the enemy turret emplacements. While destroying all patrol vessels isn't required, doing so will earn additional points. Should the player die, they will be brought back to the drydock screen to refit their ship and try again.



## Gameplay Walkthrough

Due to the level taking a more 'arena' style of gameplay, players will have multiple paths to take to reach their objectives when entering the level. The example presented below shows one of many options the player has to complete the level.





### Parts 1 - 3:

When the player first enters the level, they are immediately placed at the outer edge of the map, facing a vast space station on the far end of a cluster of asteroids. The initial starting distance helps to teach the player the movement controls from tutorial dialogue text. As they move forward towards point 1, the semi-hidden turret takes notice and begins to fire.

After eliminating the turret, a small patrol squadron takes notice at point 2A. By the time the player reaches point 2, the enemy vessels have begun to swarm and attack.

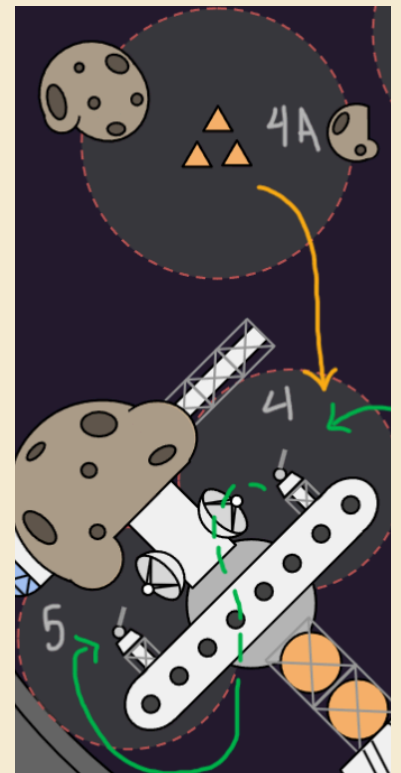
After destroying the enemy patrol, the player maneuvers to their next target at point 3, where they must carefully destroy a railgun turret.

### Parts 4 - 5:

After eliminating the railgun, only two turrets remain. The player heads towards the station at point 4, unknowingly attracting the attention of a patrol squadron at point 4A.

Carefully dodging the attacks from the patrol squadron, the player swiftly maneuvers to destroy the final turret at point 5.

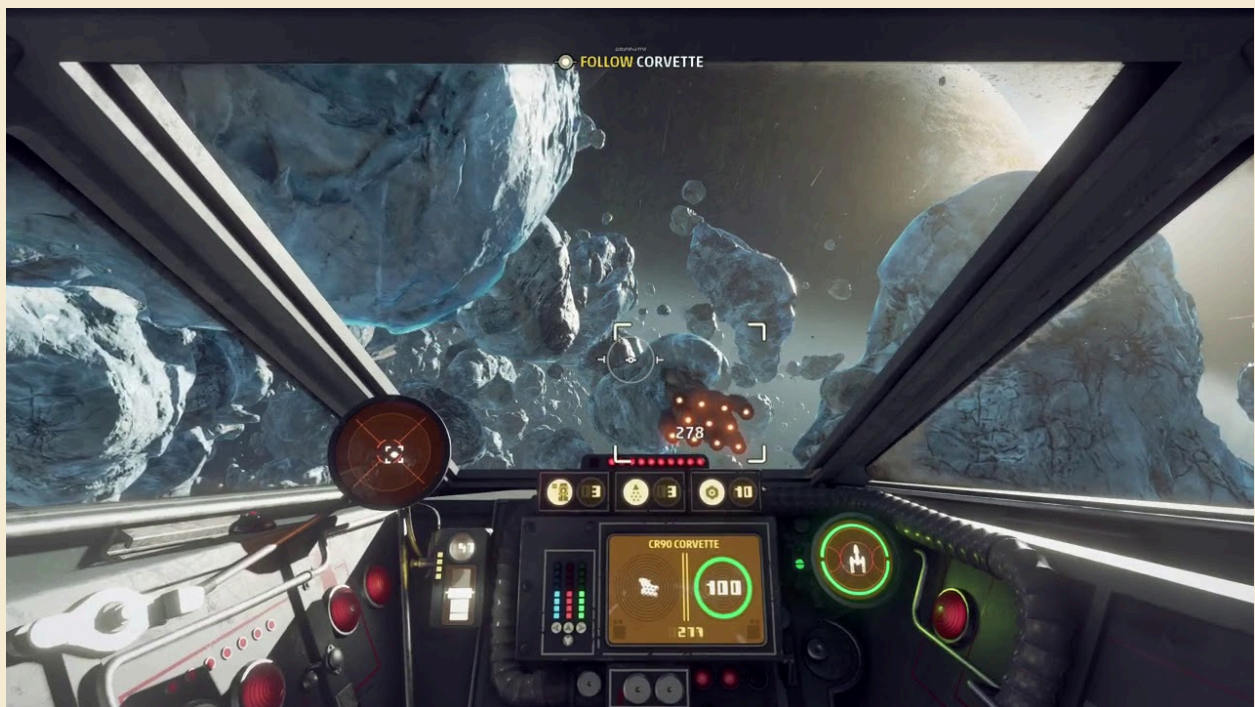
Upon destroying the last turret, the player will automatically warp out of the system, where they will be presented with a points screen, as well as the new weapon or component they unlocked for the first time completing the mission.



## Reference Images

When designing the layout of Saturn, I tried to research other games and media that depicted combat within an asteroid or debris field. For films and TV series, this was unsurprisingly easy. In [Star Wars: The Empire Strikes Back](#), the Millennium Falcon famously dodges tie-fighters within a dense asteroid field. While unrealistic, this dramatic and chaotic feel was part of the inspiration for the density of asteroids present in the level.

In [House of the Dying Sun](#), a mission called Operation Vengeful Baron utilizes a spacious asteroid field to provide cover during a firefight. In [Star Wars: Squadrons](#), the first Imperial faction mission centers around a large asteroid base, and utilizes the asteroid itself as a 'soft' level barrier. In the Rebel faction storyline, the majority of missions surround, or are set in, asteroid fields. [In the multiplayer mode](#), one of the maps utilizes a dense asteroid field surrounding a broken venator-class star destroyer. Additionally, [Elite Dangerous](#) has several combat missions set within planet rings and asteroid fields.







Combat depicted in asteroid fields in Star Wars: Squadrons (top and middle), and Elite Dangerous (bottom)



While there are several more examples of games and media I could list from my research, these four were the primary inspiration for creating Saturn. By incorporating the idea of a large imposing asteroid as a visual world boundary, having dense asteroids populated with enemies and turrets, and a large anchored station to center the environment around, I was able to create a challenging yet fun level for our game.

## Asset List

When creating Saturn, a few unique prefabs, 3D models, and materials will be needed to achieve the desired gameplay feel and environment appearance while conforming to our 'Optimistic Realism' aesthetic. While some of these will be achieved using in-engine tools, most assets and materials will need to be created by our prop artist.

When developing asteroids for the environment and levels, we will be using the Houdini tool plugin to randomly generate different shapes and sizes of asteroids. For these generated asteroids, we will need an 'asteroid' material to assign to them. For the defenses in the level, two special turret models would be desired. For the meantime with our current scope, we will use the planet model and skybox created previously to help with the gameplay immersion. Additionally, we will need the modular space station parts to build the turret platforms and anchored station in the level.

In short, the minimum materials and assets desired are:

- 'Tan / gray' Asteroid texture materials, to be assigned to Houdini generated asteroids (tan / gray add to the triadic color scheme we're using)
- 2 types of turret models: Auto and Railgun (with possible animations later in development)
- 1 blank skybox with nebulae color shading
- Modular space station parts that can be reassembled for different missions
- 1 type of enemy ship model (with possible animations later in the semester)