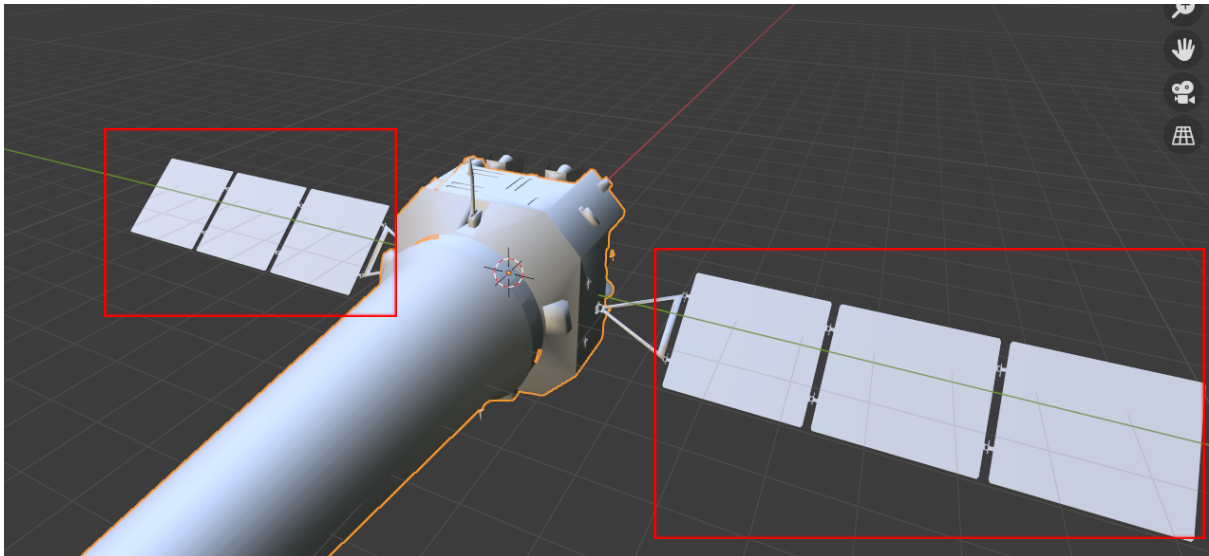


There are 10 key parts of a satellite that we should label. Note that not every single part will be present in every satellite. **Every other part of the satellite that is not here should be colored black (0 / 0 / 0).**

### Solar Panels

Description: Large rectangular surfaces

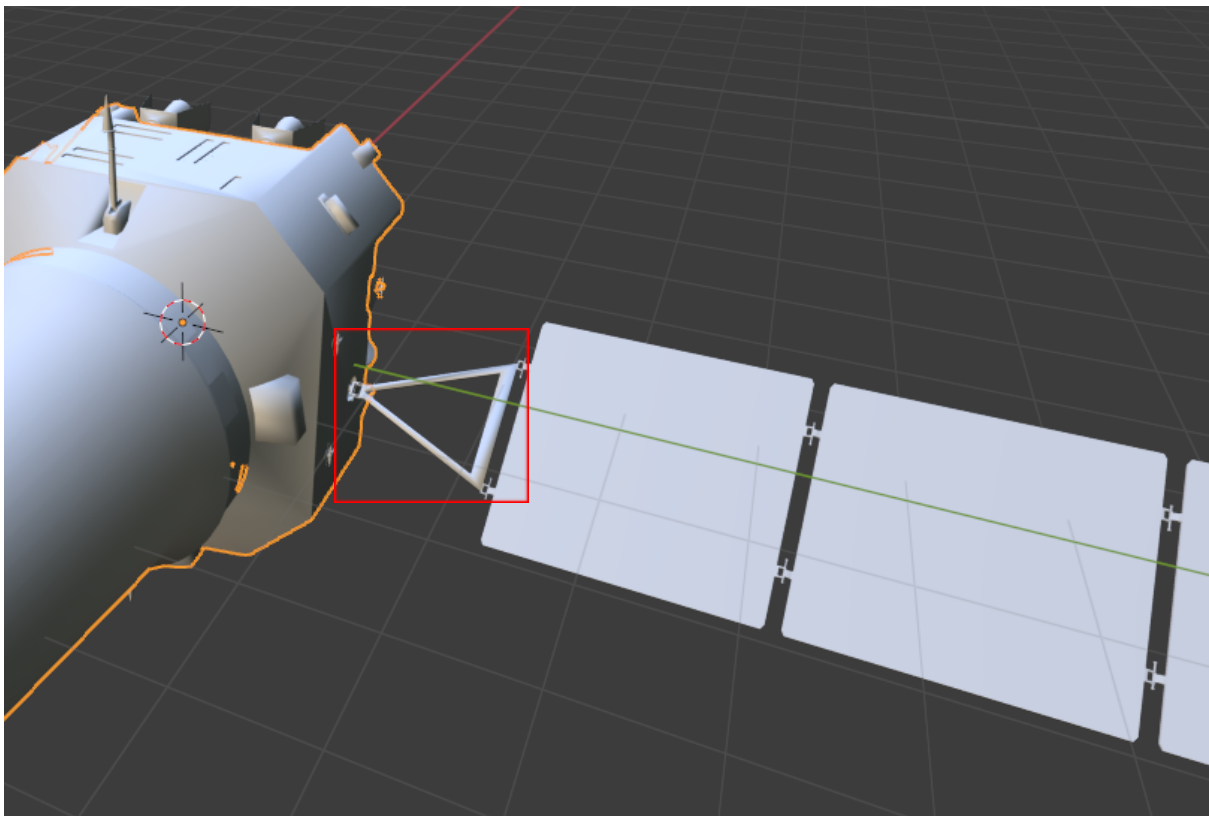
Color (R / G / B): 1 / 0 / 0



### Solar Panel Drive Shaft

Description: Connector between the solar panels and the main body of the satellite

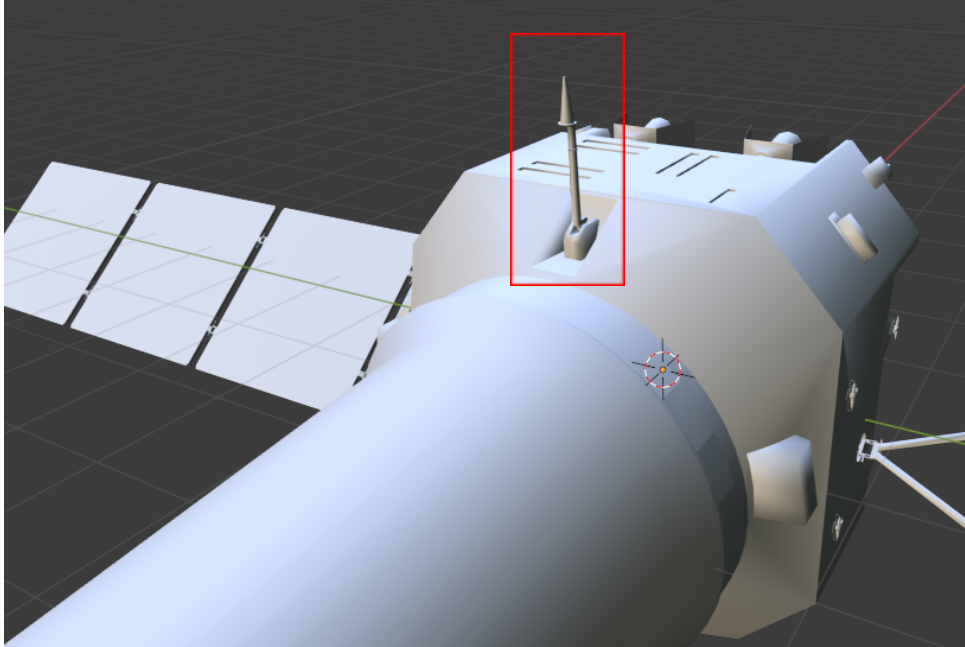
Color: 0 / 1 / 0



### Parabolic Antenna

Description: The antenna of the satellite which sends and receives signals with ground control. During satellite rendezvous, we do not want other satellites to come in front of the antenna as it will block signals from ground control.

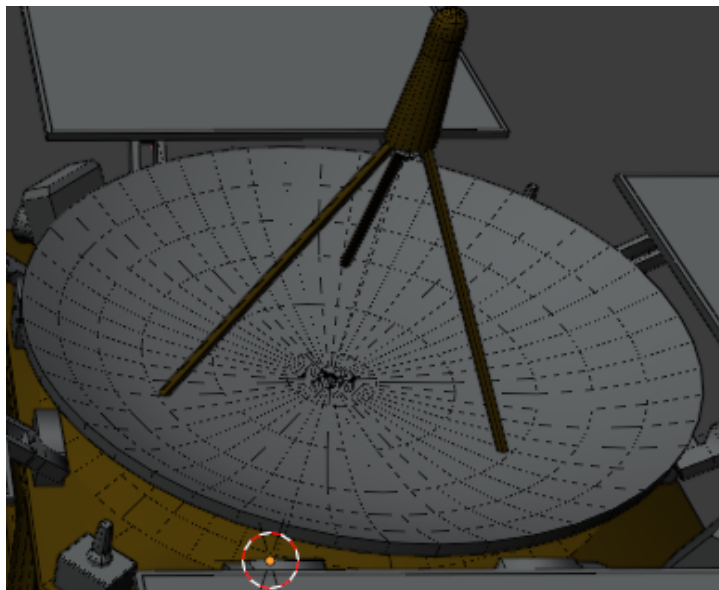
Color: 0 / 0 / 1



### Satellite Dish

Description: This dish amplifies incoming signals. Similar to the parabolic antenna, we do not want other satellites to block the dish from receiving signals. The dish is round with a slight depression.

Color: 1 / 1 / 0

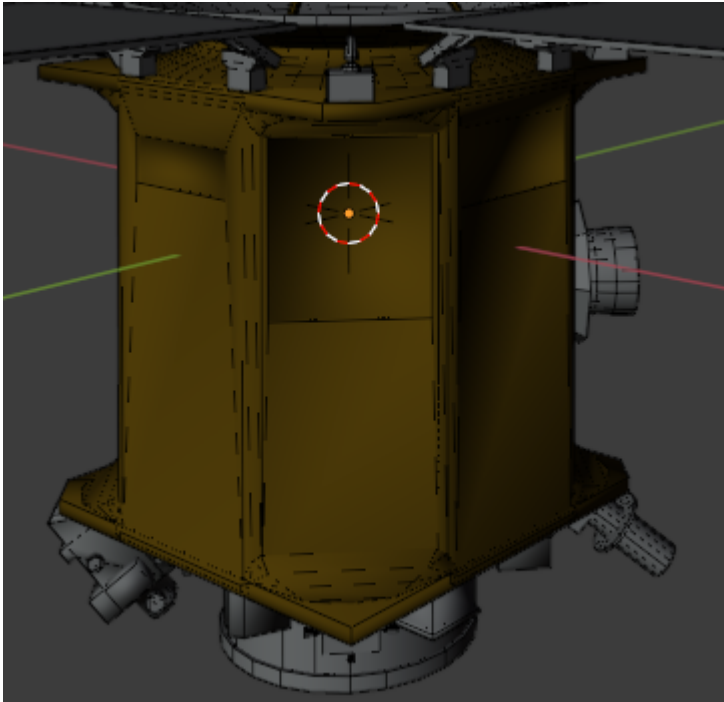


*Dish with parabolic antenna*

### Main Module

Description: The main body of the satellite.

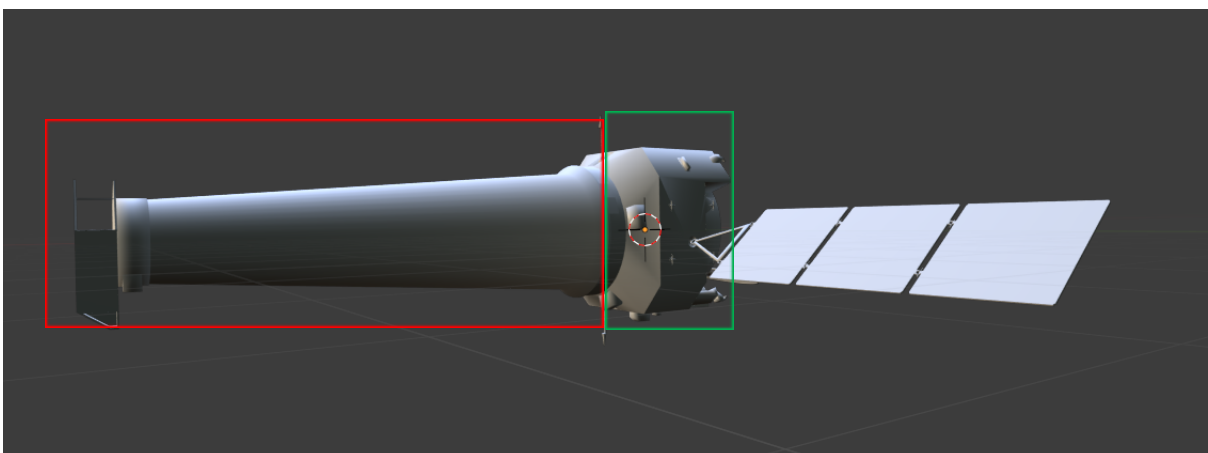
Color: 1 / 0 / 1



### Telescope

Description: Certain satellites have this (e.g., CHANDRA). CHANDRA has a main body (green box) with a long telescope attached behind (red box). The camera is at the end of the telescope. The telescope is long to avoid magnetic interference between the telescope and the main satellite.

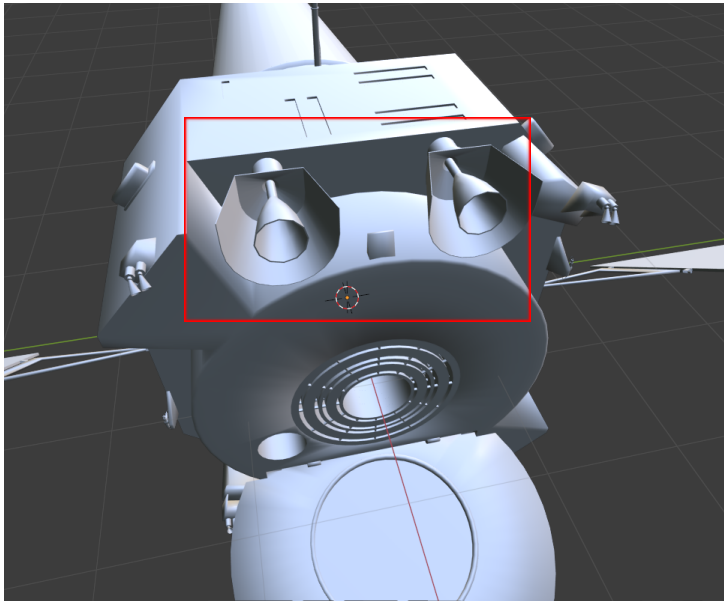
Color: 0 / 1 / 1



## Main Thrusters

Description: The main thrusters are cone-shaped objects (becomes more and more narrow as you go into the thrusters). The main thrusters are **aligned with the center of mass** of the satellite. These thrusters provide translational thrust (think of it as propelling the satellite forward/backward with zero satellite rotation). During satellite rendezvous, **we do not want other satellites to come near these thrusters** as these thrusters emit fluids.

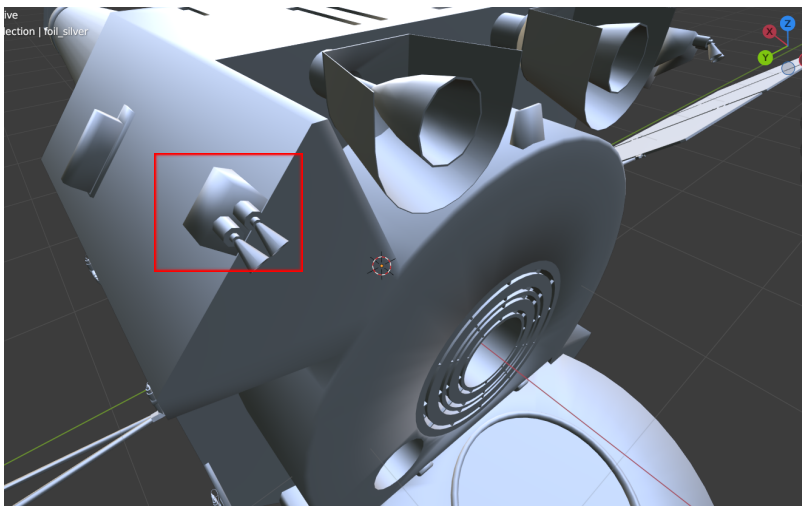
Color: 1 / 0.5 / 0.5



## Rotational Thrusters

Description: These are **smaller** thrusters. They are **not pointing towards the center of mass** of the satellite. These thrusters allow the satellites to rotate. Similar to the main thrusters, these thrusters emit fluid and so **we don't want satellites to come close during rendezvous**.

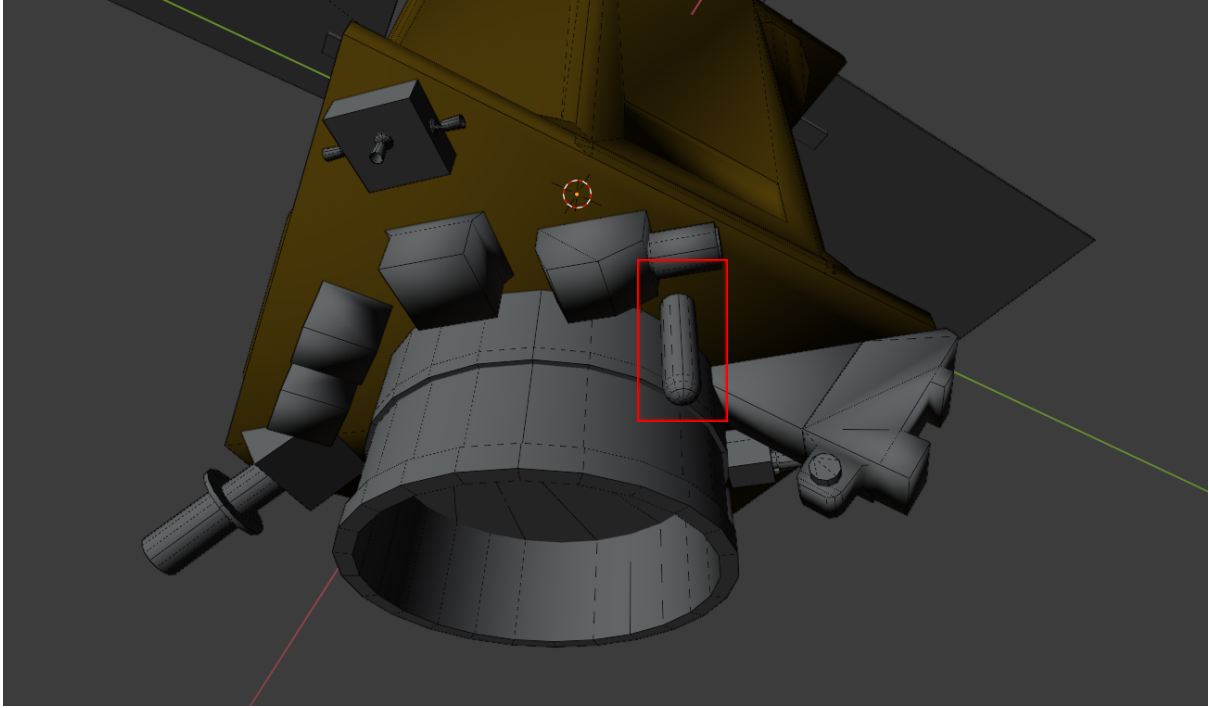
Color: 1 / 0.8 / 0.3



## Sensors

Description: Basically, any tube-like objects sticking out from the satellite are sensors of some kind (e.g., optical sensors).

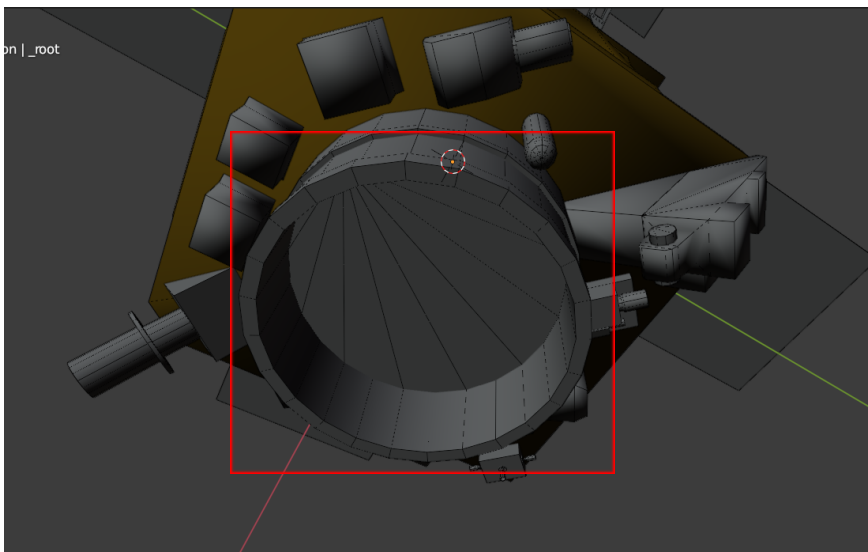
Color: 0.5 / 1 / 1



## Launch Vehicle Adapter

Description: Coffee cup-like ring at the bottom of the satellite. This is a viable choice for satellite docking – other satellites can grip onto this ring to attach themselves to the satellite. The ring is in line with the center of mass of the satellite so that it is optimal for grabbing.

Color: 0.25 / 0.5 / 0.75



*Only the rim should be chosen*