

ORION

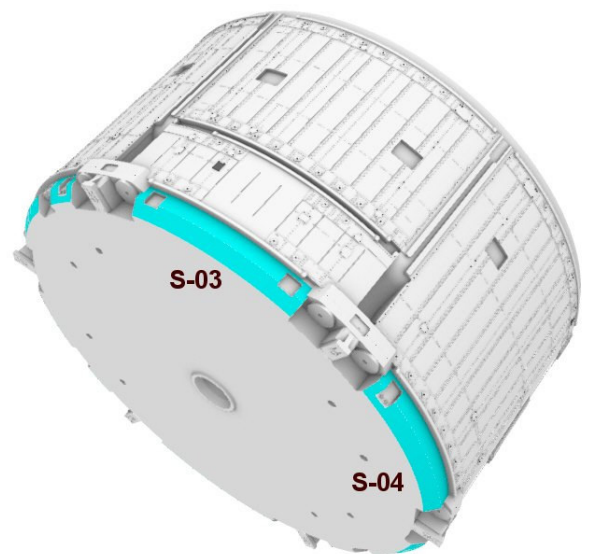
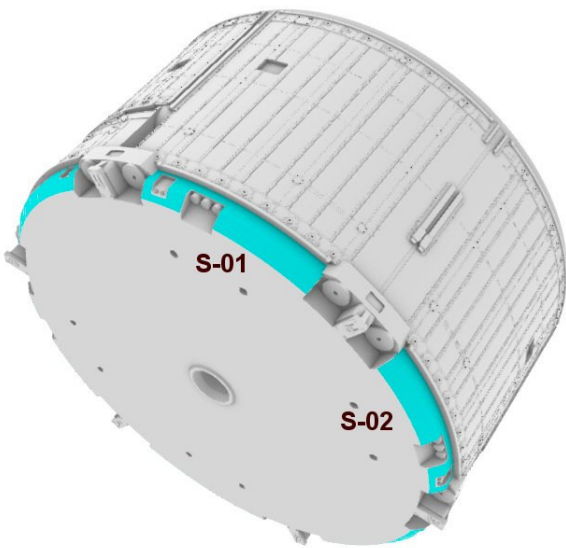
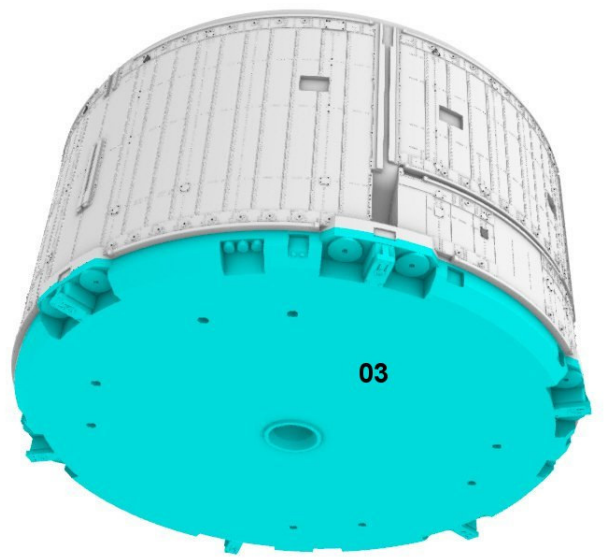
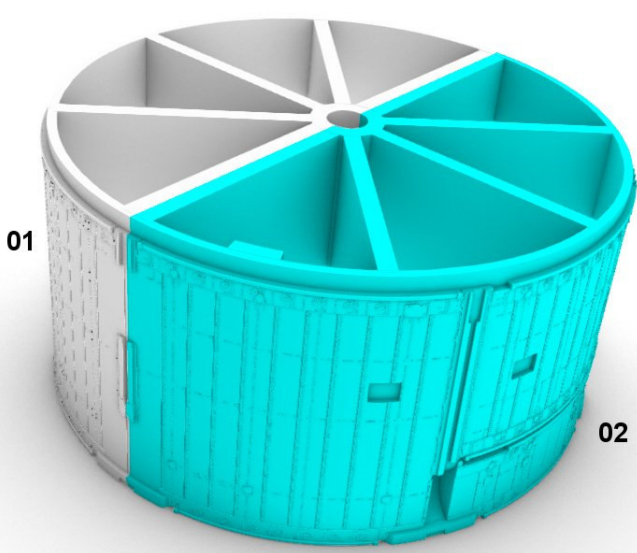
spacecraft

For further information on building this model check

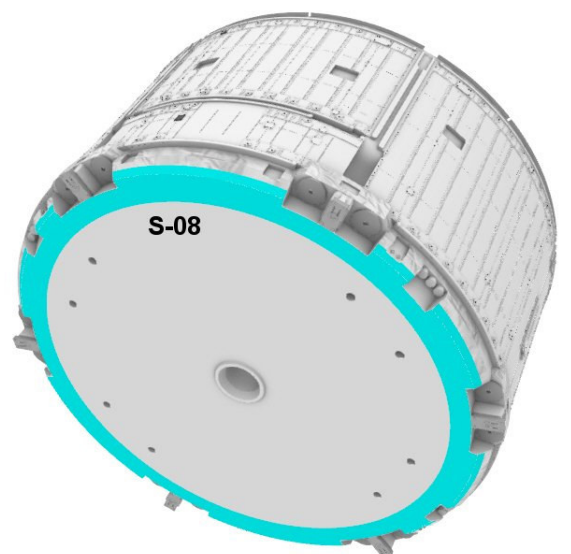
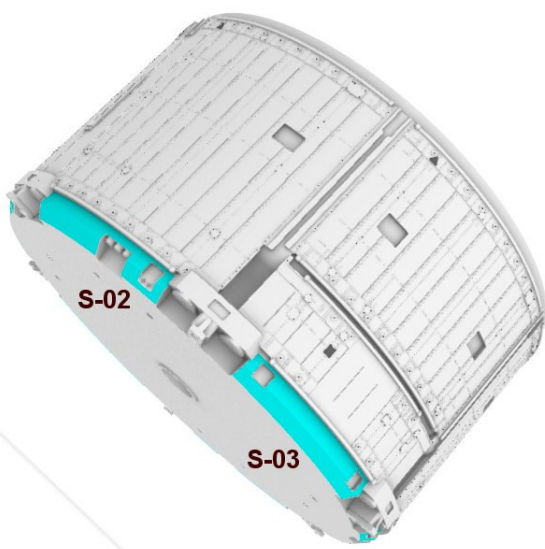
<http://spacemodels.nuxit.net/1-48%20CSM/index.html>

ORION

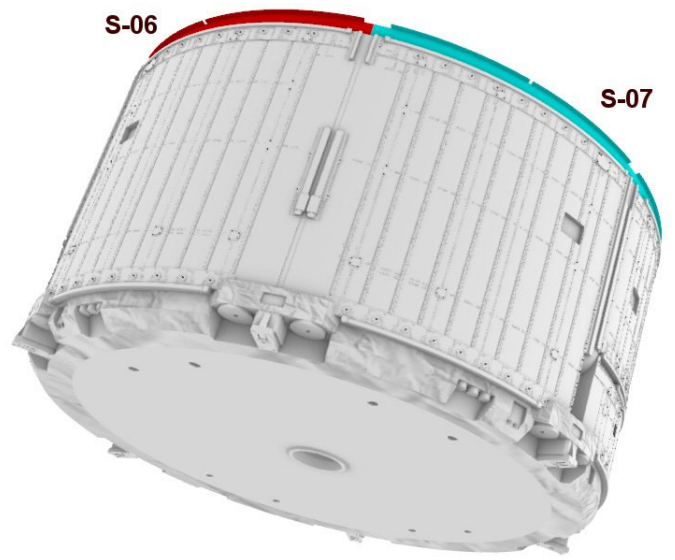
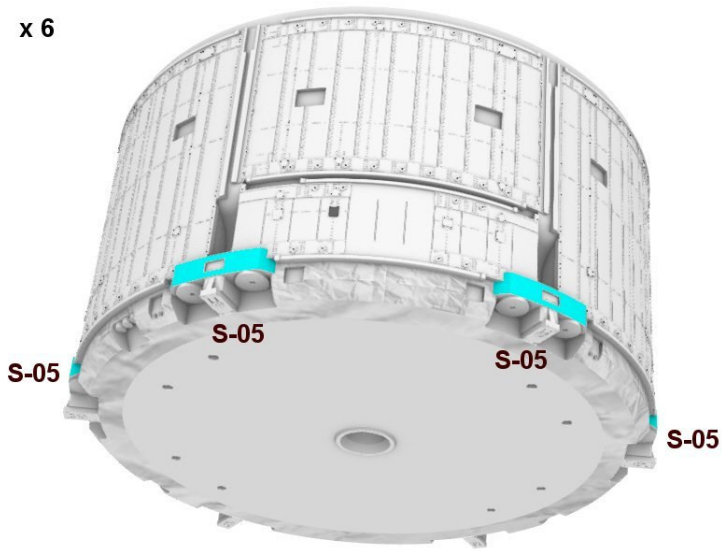
Service Module



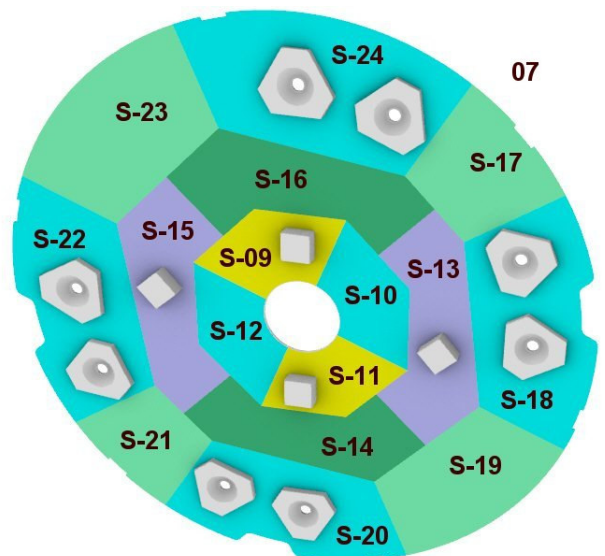
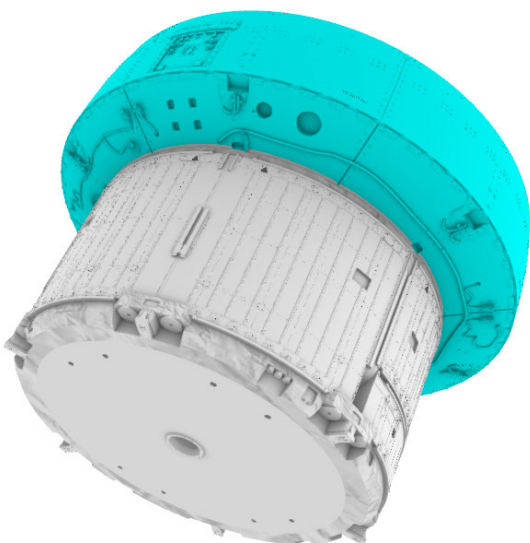
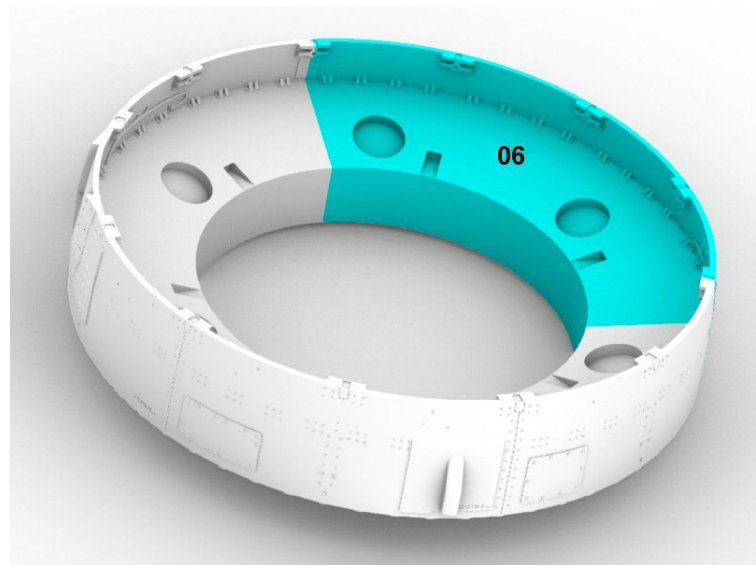
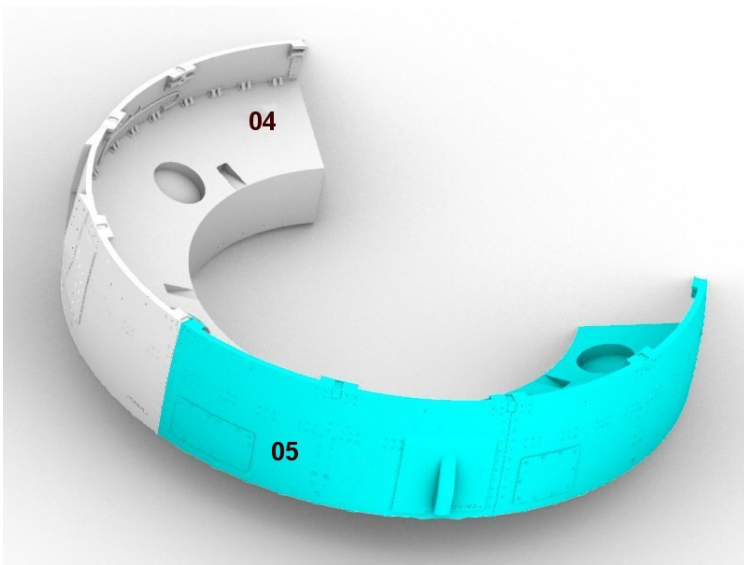
You can use the [pattern.pdf](#) file to cut parts S-01 to S-05 in aluminium foil or paper. All parts need to be crumpled in order to mimic the thermal blankets around the service module.



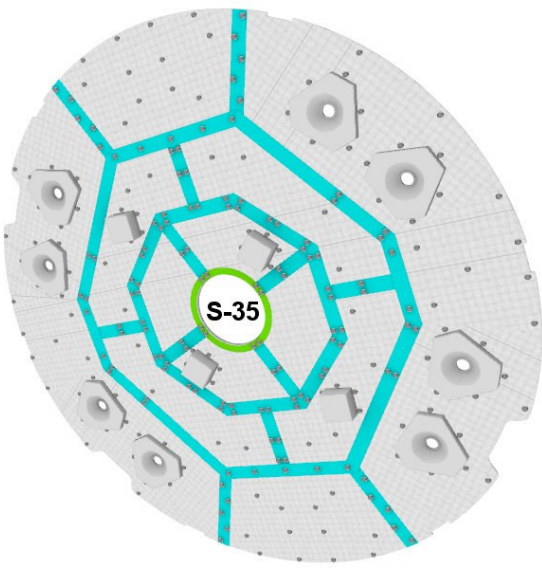
x 6



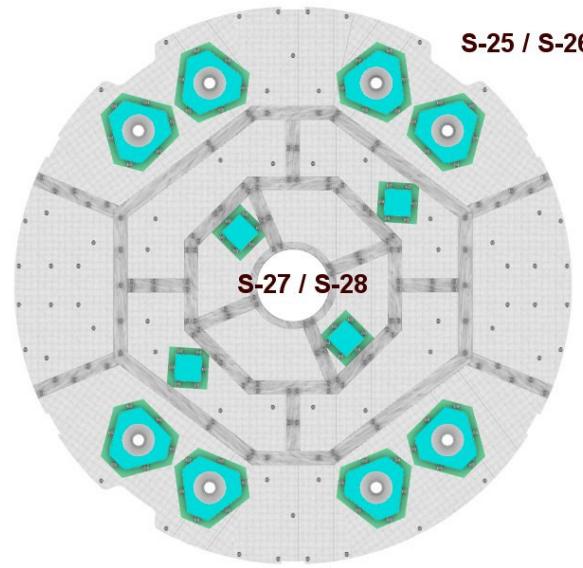
You can use the pattern.pdf file to cut parts S-05, S-06 and S-07 in aluminium foil or paper. These parts need to be crumpled in order to mimick the thermal blankets around the service module.



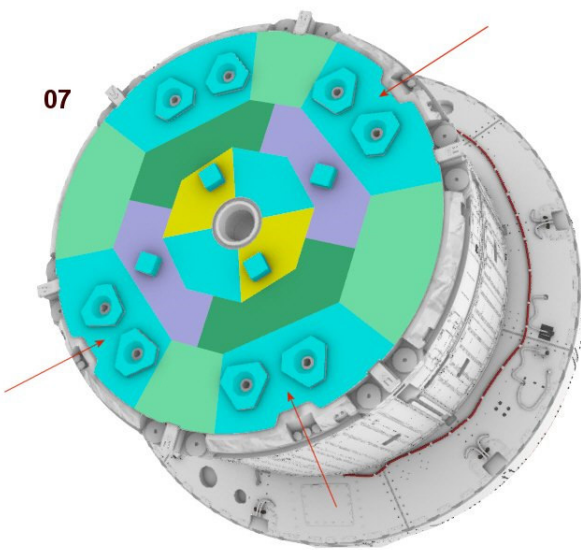
You can use the pattern.pdf file to cut parts S-09 to S-24 in embossed paper such as the one protecting new tablets or new phones



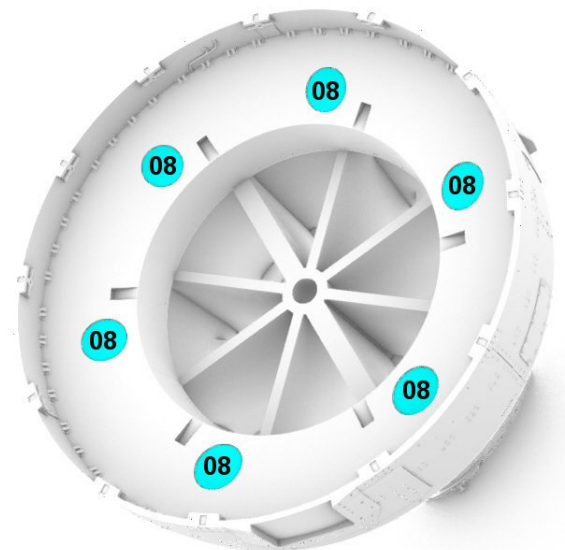
2 mm wide bands of papers.



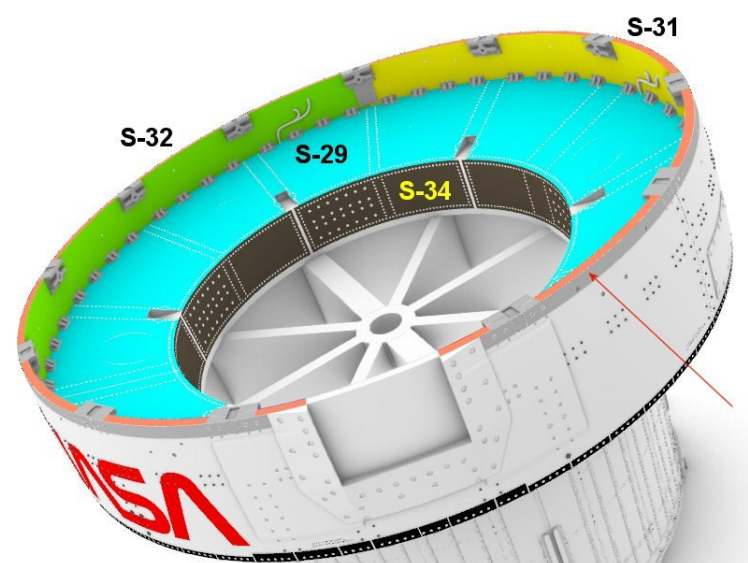
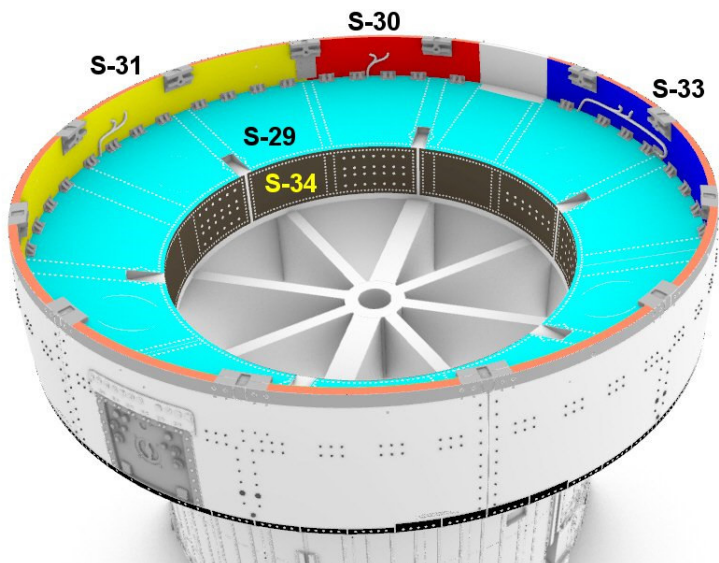
Parts S-25 to S-28 are cut into embossed paper.



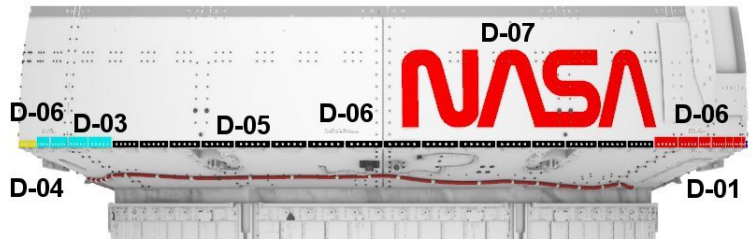
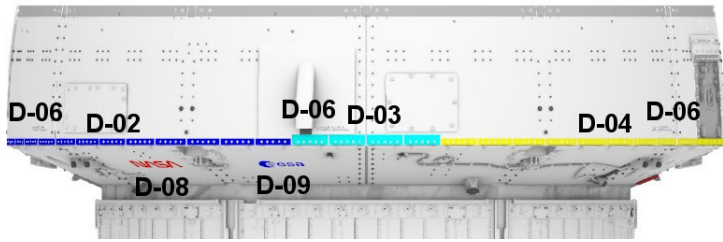
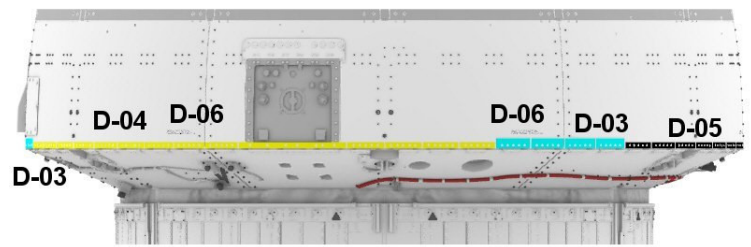
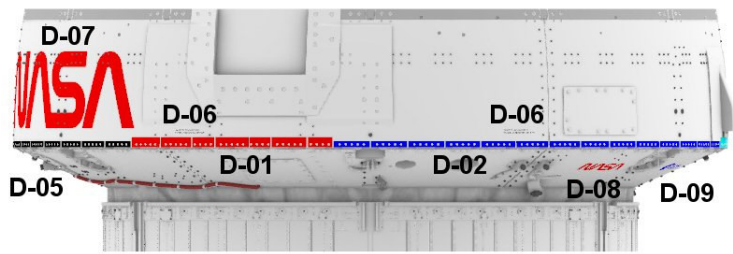
Align part 07 with the service module (see the 3 arrows). At this stage the service module can be painted in mat or satin white before painting details (see the last pages for information about painting details).



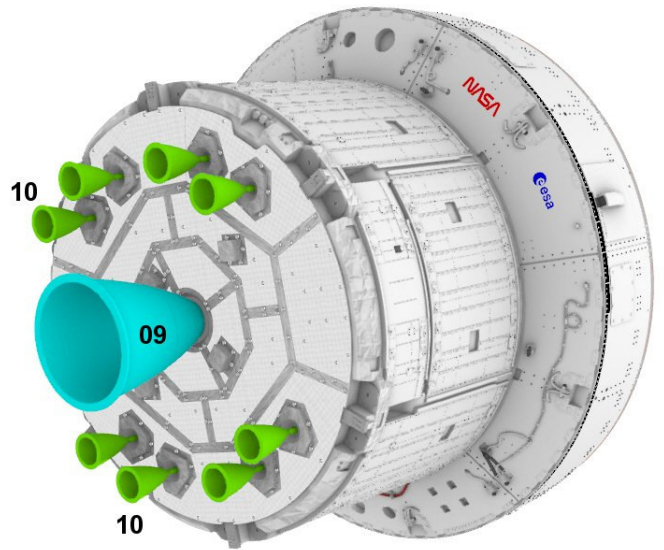
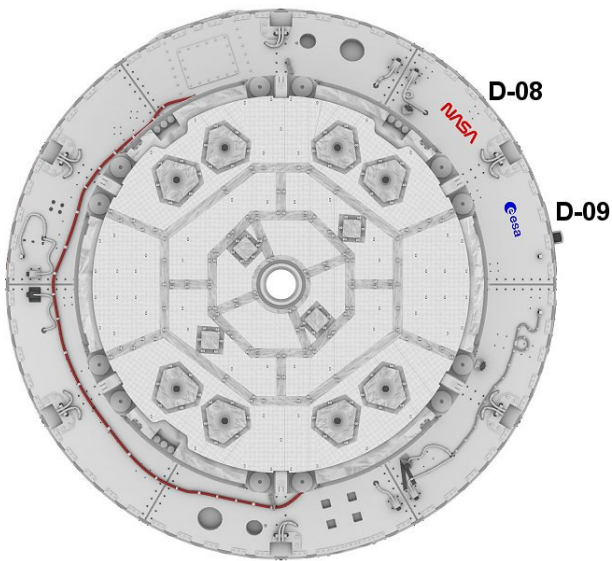
Parts 08 are strong magnets that will help to ensure contact between the service and the command modules. There are 10 mm wide and 2 mm thick (see <http://tinyurl.com/bdfysrwy>).



Surfaces S-29 to S-34 are glued inside the SM-CM adapter. A band of about 1.8 mm wide adhesive aluminium paper is fixed on the top of the SM/CM adapter (see red arrow on the right picture).

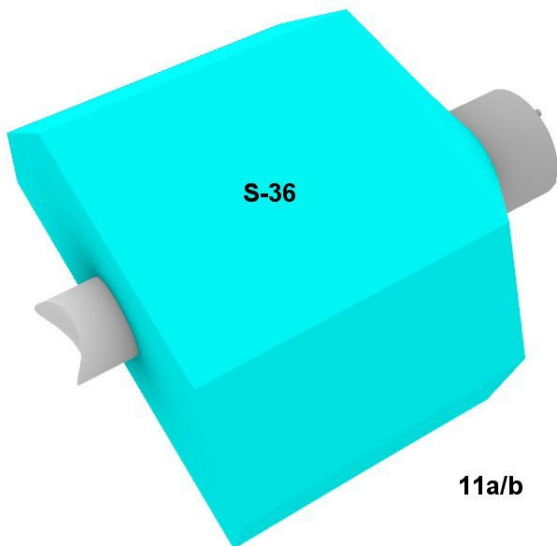


Placement of the decals on the SM-CM interface (see the file decals.pdf). Decals may be printed on white decal paper.



Placement of the decals on the SM-CM interface (see the file decals.pdf). Decals may be printed on white decal paper.

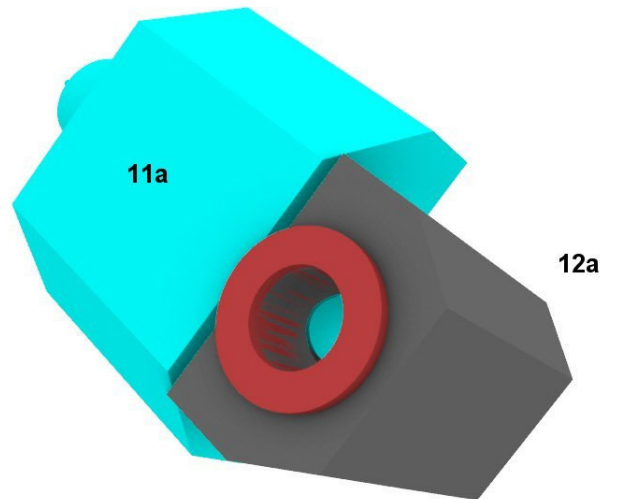
x 2



11a/b

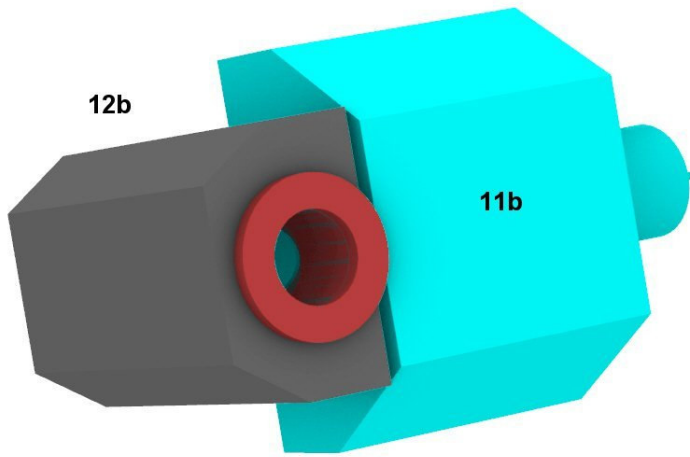
Parts 11a and 11b are covered with embossed paper (pattern S-36).

x 2



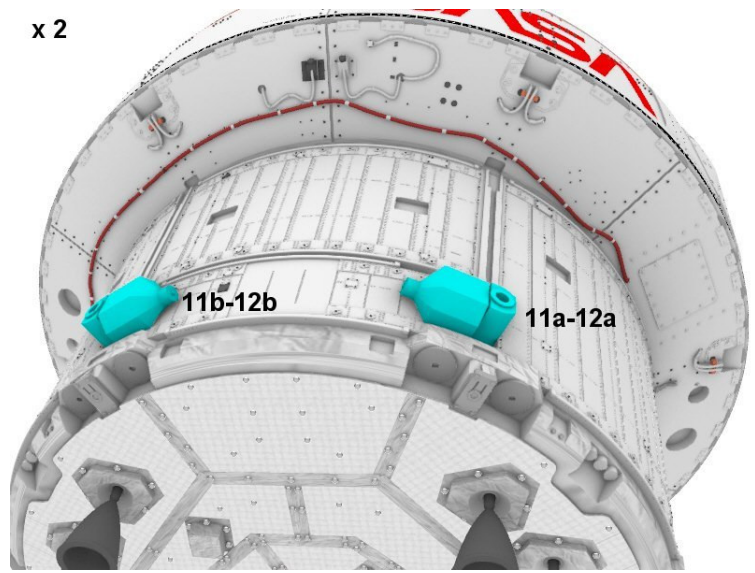
Inclination of part 12a will depend on the solar array inclination that you want to represent.

x 2



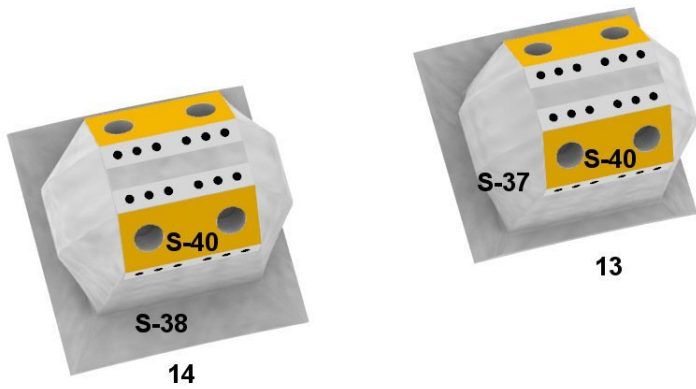
Inclination of part 12b will depend on the solar array inclination that you want to represent.

x 2



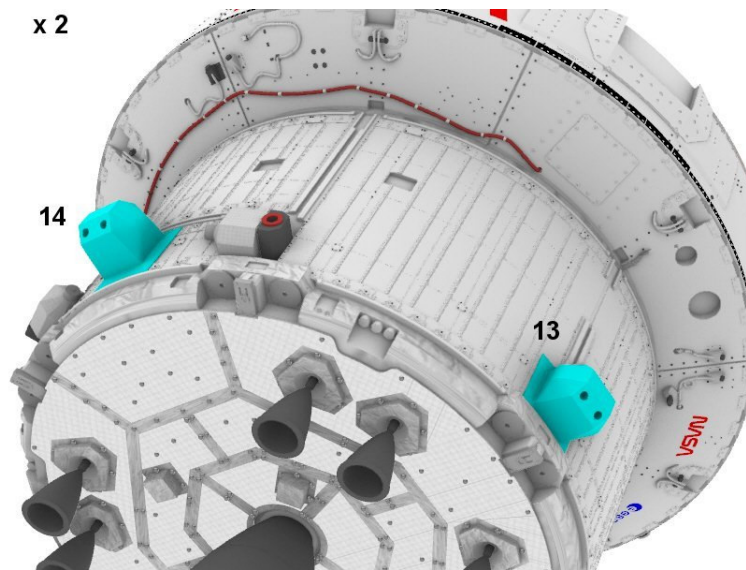
Complete solar array drives fixed on the service module (on each side of the SM).

x 2

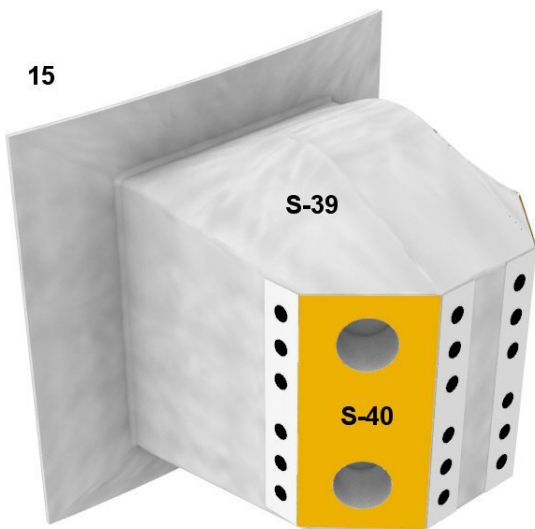


Parts 13 and 14 are covered with embossed paper and painted white. Then you can apply surfaces S-40. In the end they are fixed on the service module (on each side of the SM),

x 2

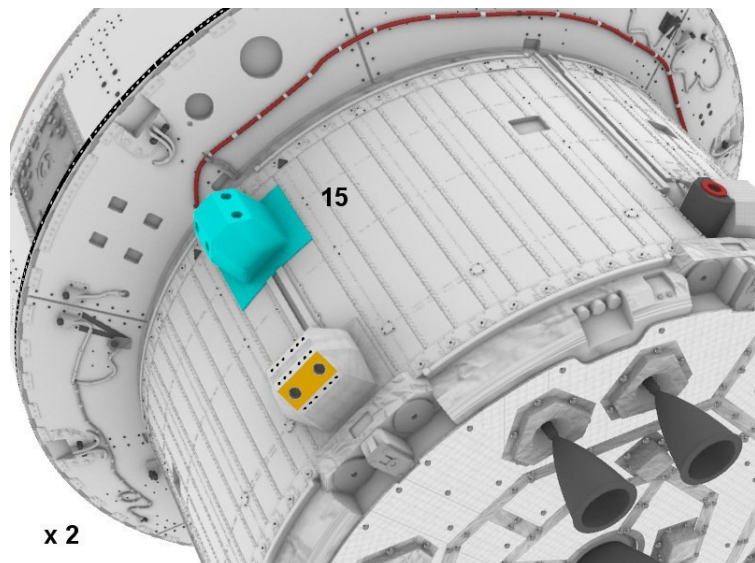


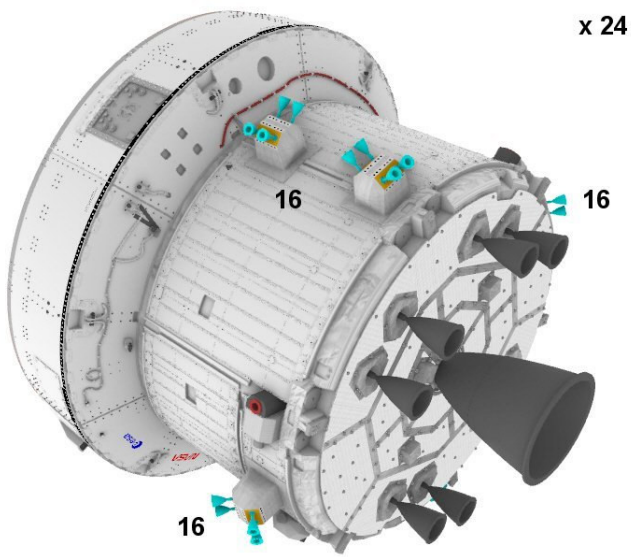
x 2



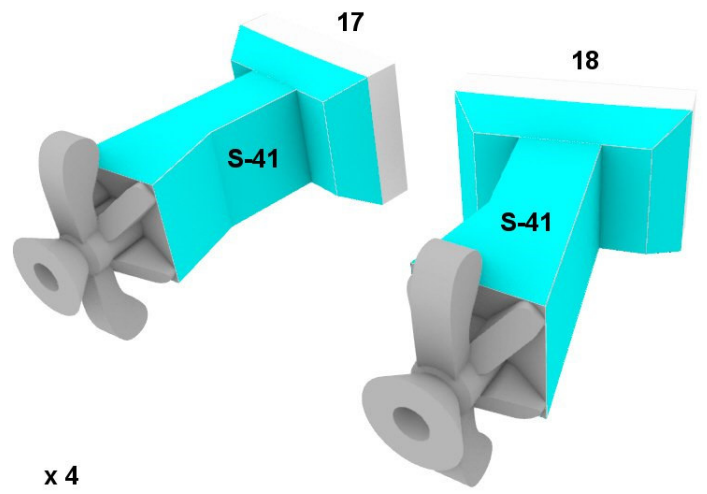
Parts 15 are covered with embossed paper and painted white. Then you can apply surfaces S-40. In the end they are fixed on the service module (on each side of the SM),

x 2

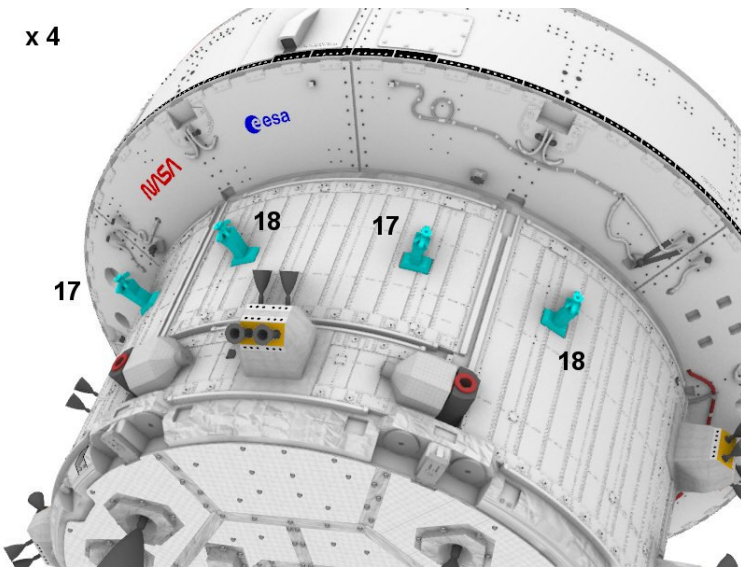




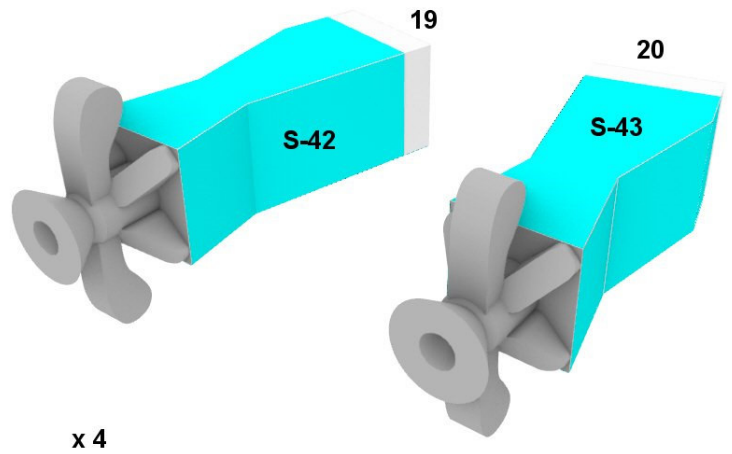
RCS thrusters are fixed.



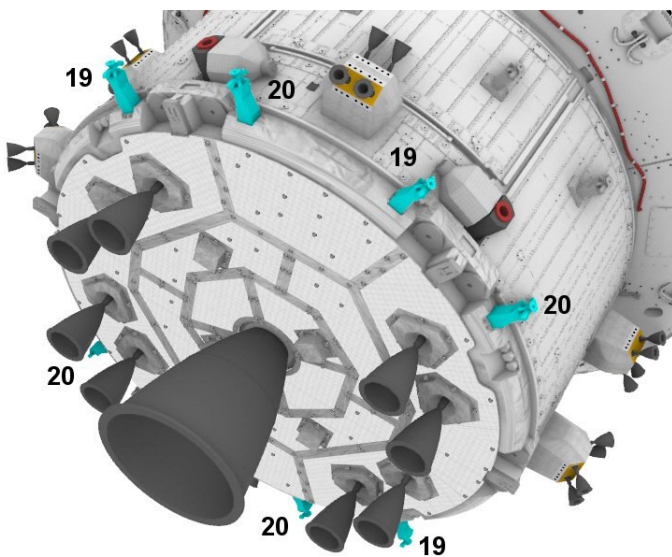
Solar array attachment devices are covered with embossed paper.



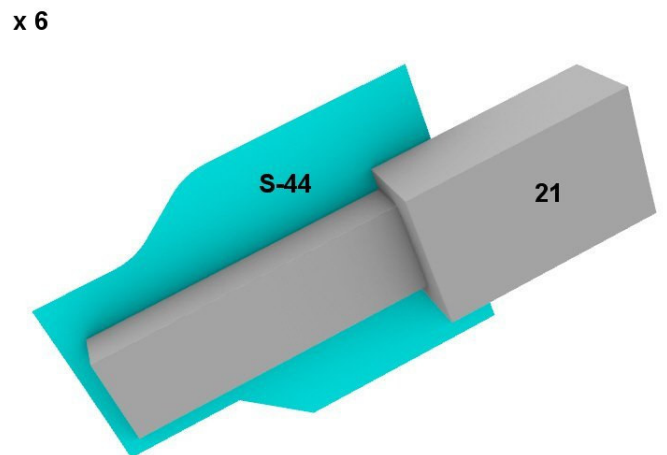
Solar array attachment devices are fixed on the service module.



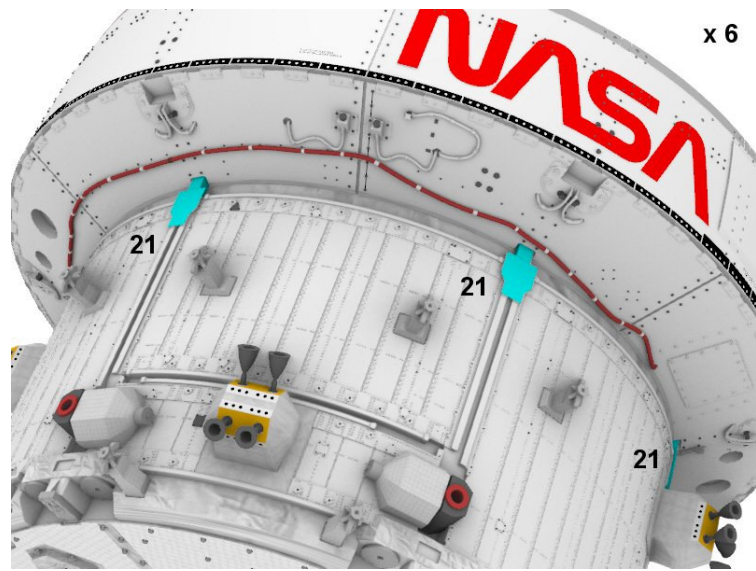
Solar array attachment devices are covered with embossed paper.



Solar array attachment devices are fixed on the service module.

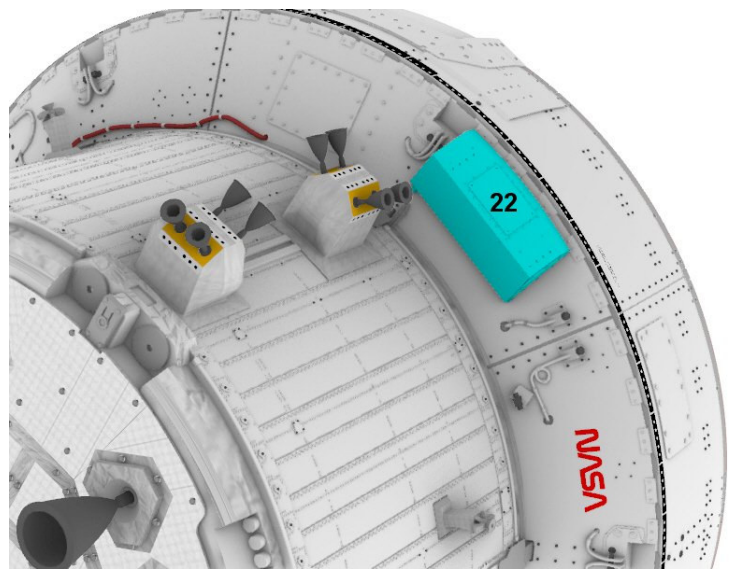


Parts S-24 need to be cut in plain paper.

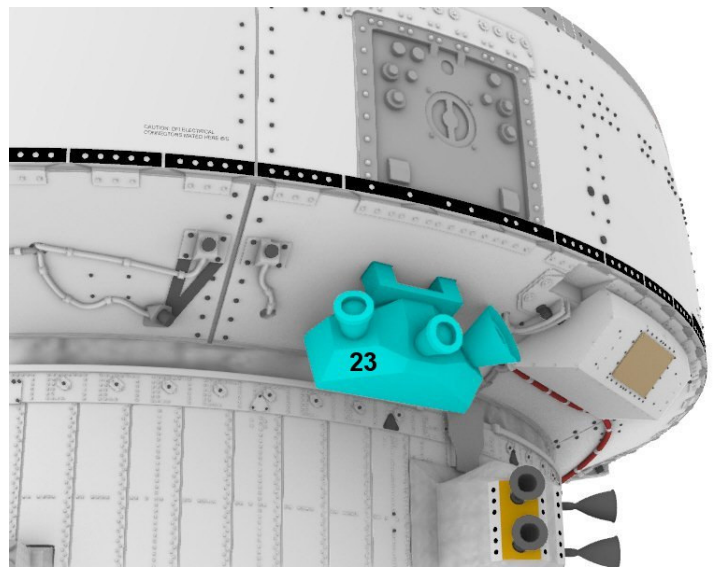
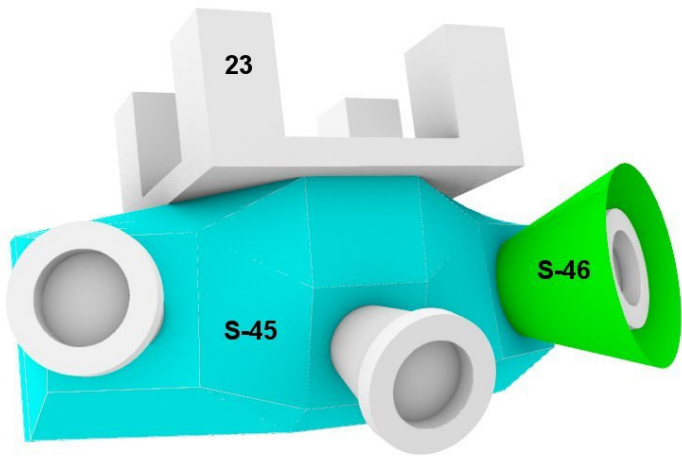


x 6

6 parts 21 are fixed around the service module.

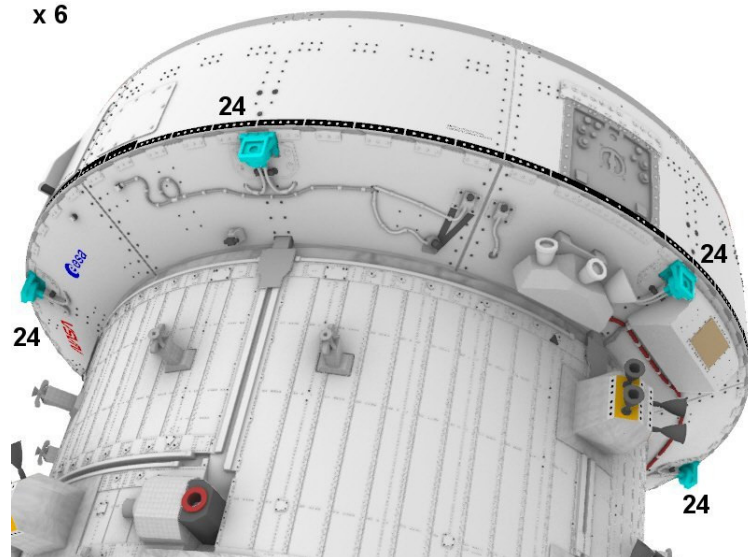


2 phased array antennas fixed on the service module.

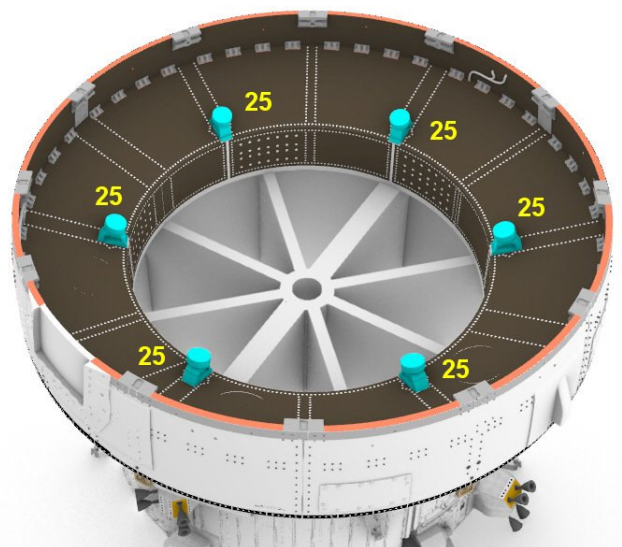


The star tracker structure is covered with embossed paper (S-45). A sun shield (S-46) is fixed around one of the tracker.

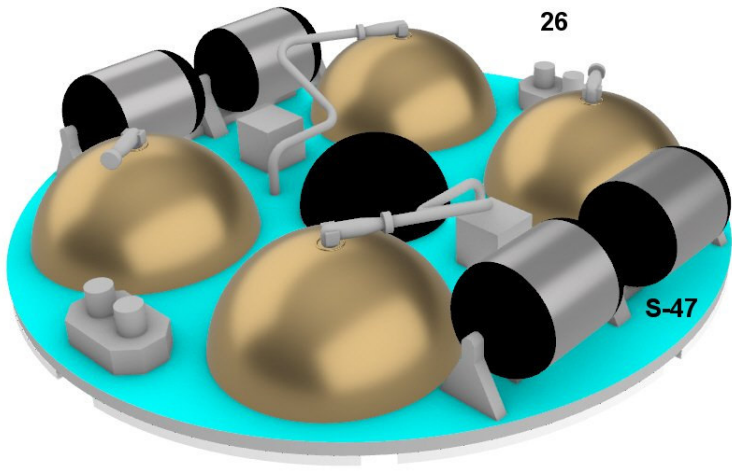
x 6



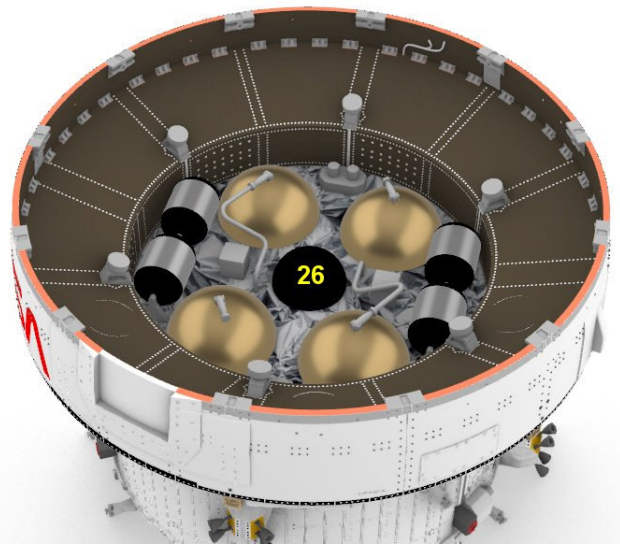
6 cameras are fixed around the CM/SM adapter.



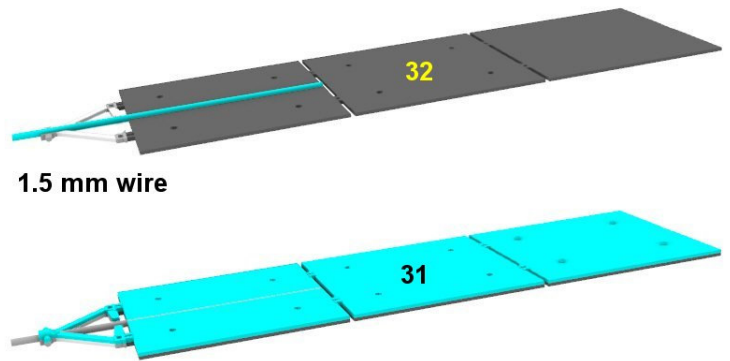
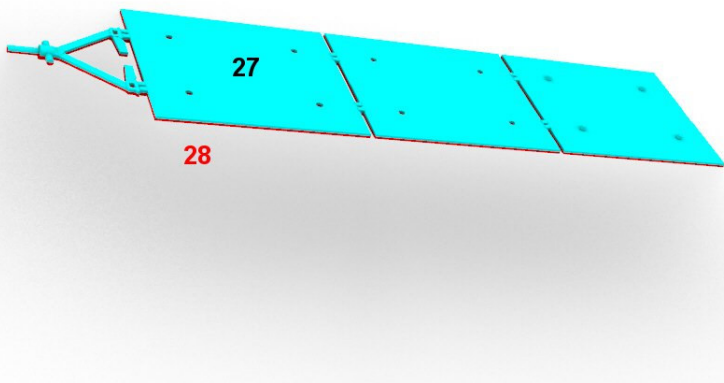
6 connectors between the the SM and the CM are fixed on the service module.



Pattern S-47 is used to insert crumpled aluminium paper at the base of part 26.

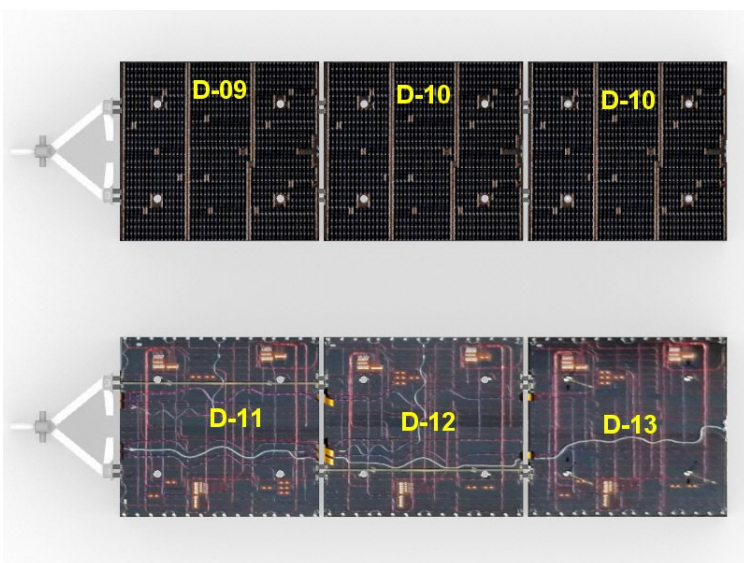


Top of fuel tanks is fixed on the service module.

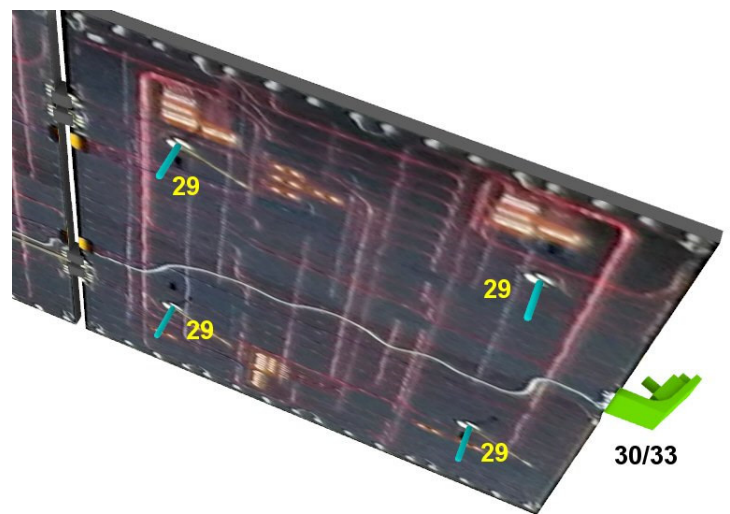


1.5 mm wire

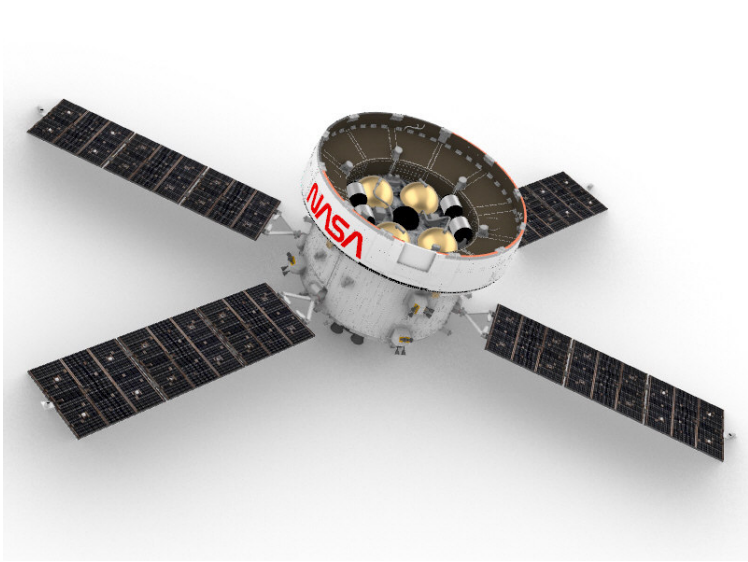
The solar panels can be made in two versions (1 mm thick on the left and 1.5 mm on the right). For the 1.5 mm panels the wire is 69 mm long. For these parts it is better to use a FDM printer and glue each part with Araldite.



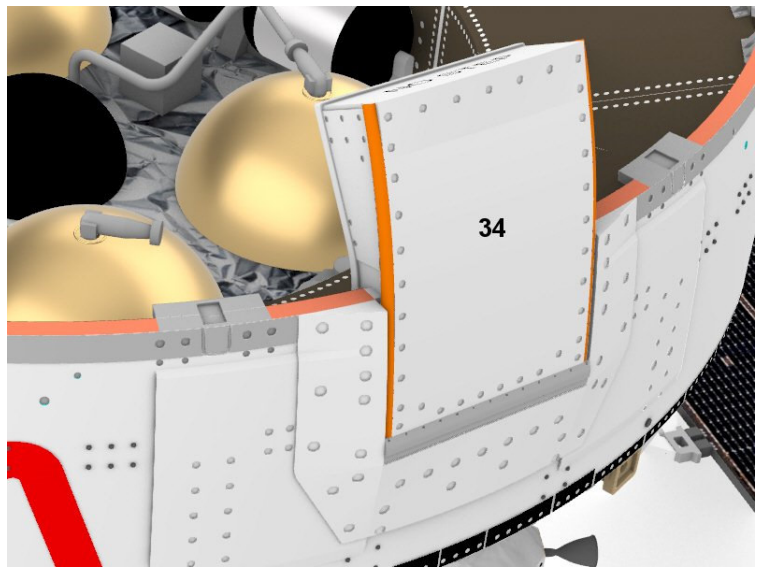
Decals to be applied on the solar panels. D-09 and D-10 are covered with gloss varnish, D-11 to D-13 with mat varnish.



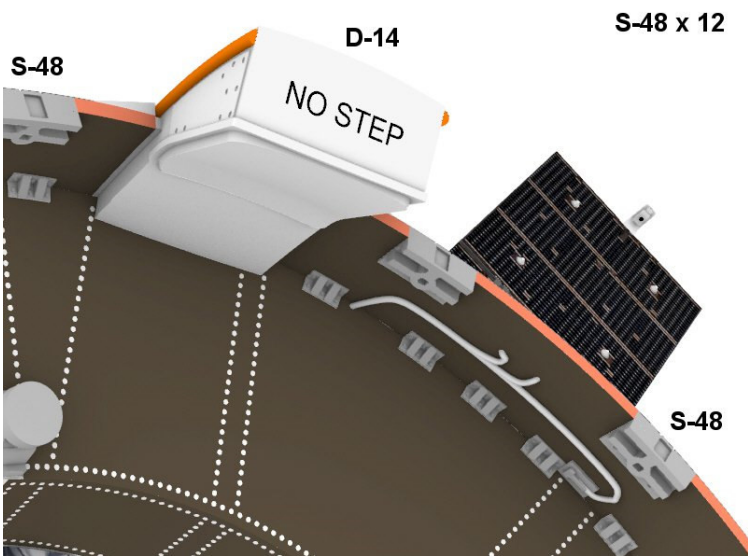
Cameras 30 are used for the 1 mm solar panels and cameras 33 for the 1.5 mm solar panels.



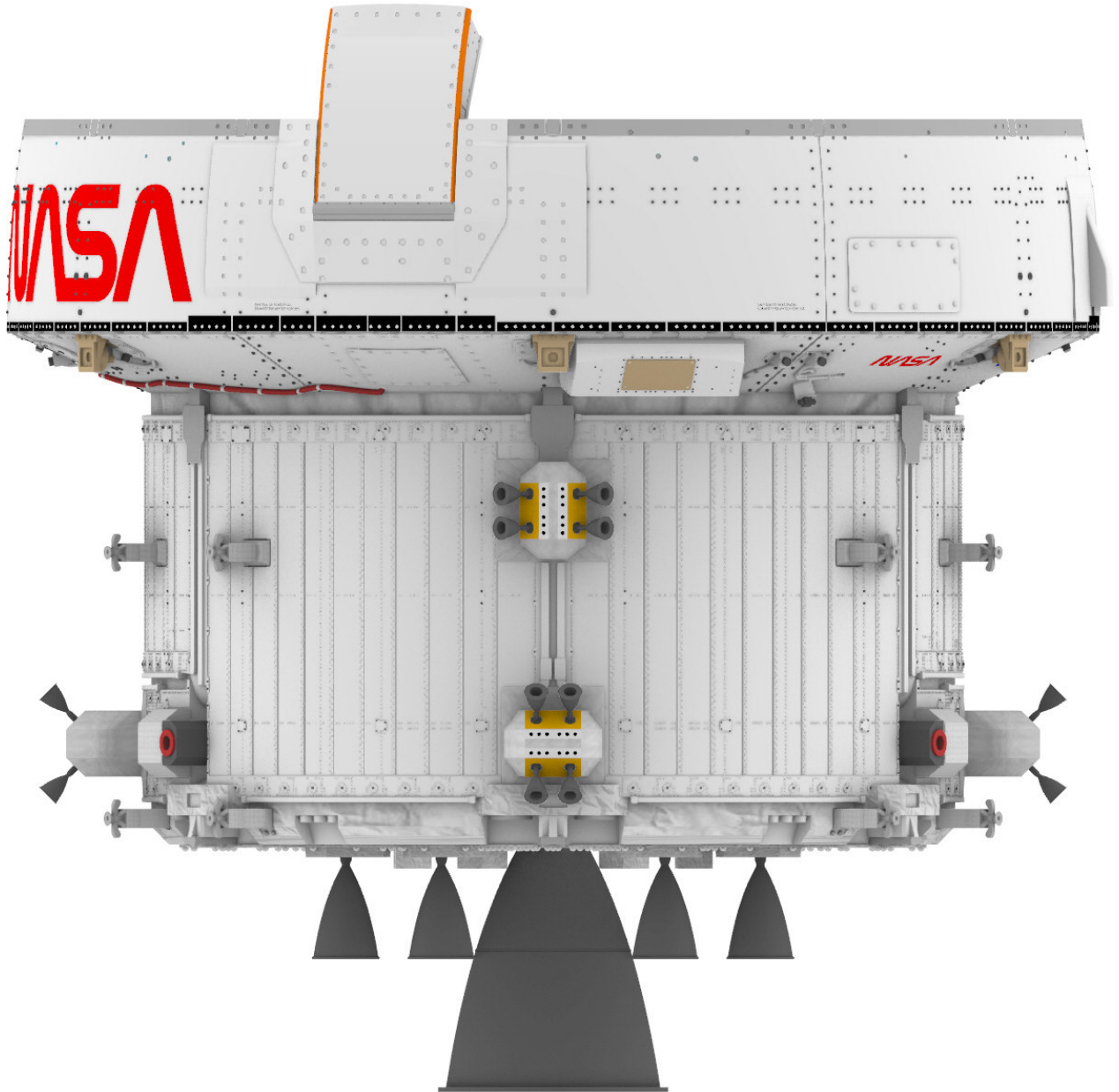
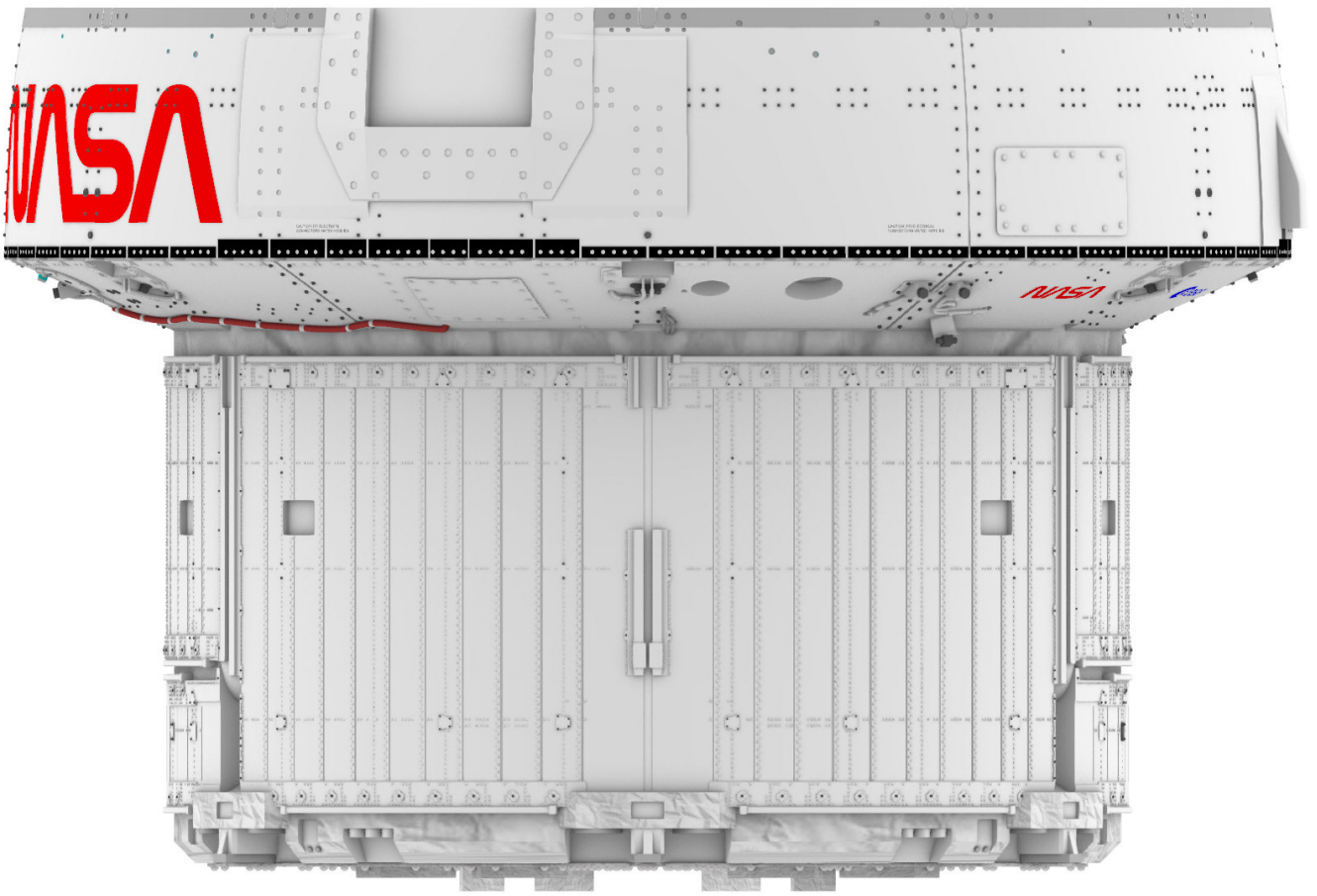
The solar panels are fixed on the service module, it is advisable not to glue these panels for easier transportation of the model.

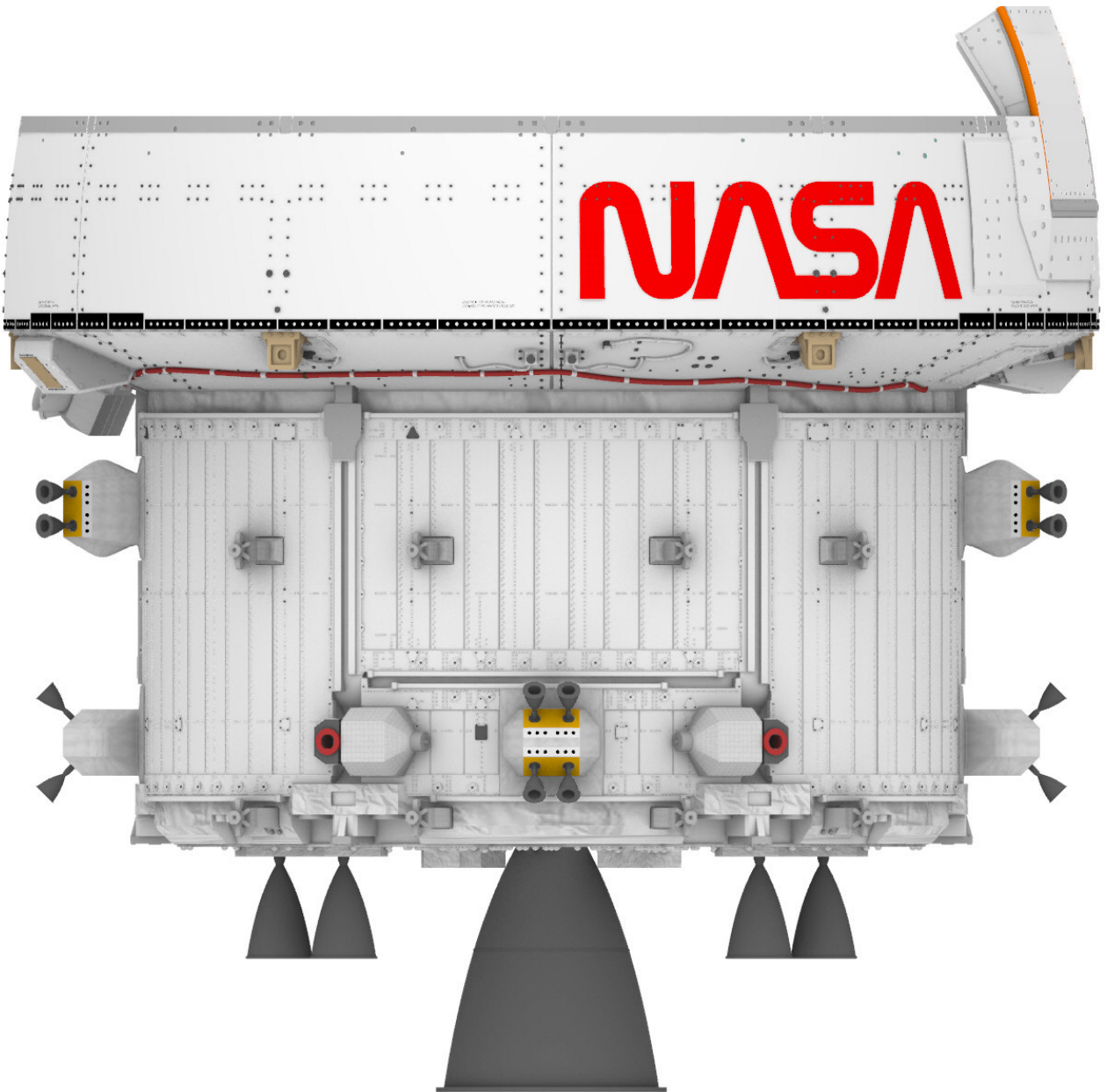
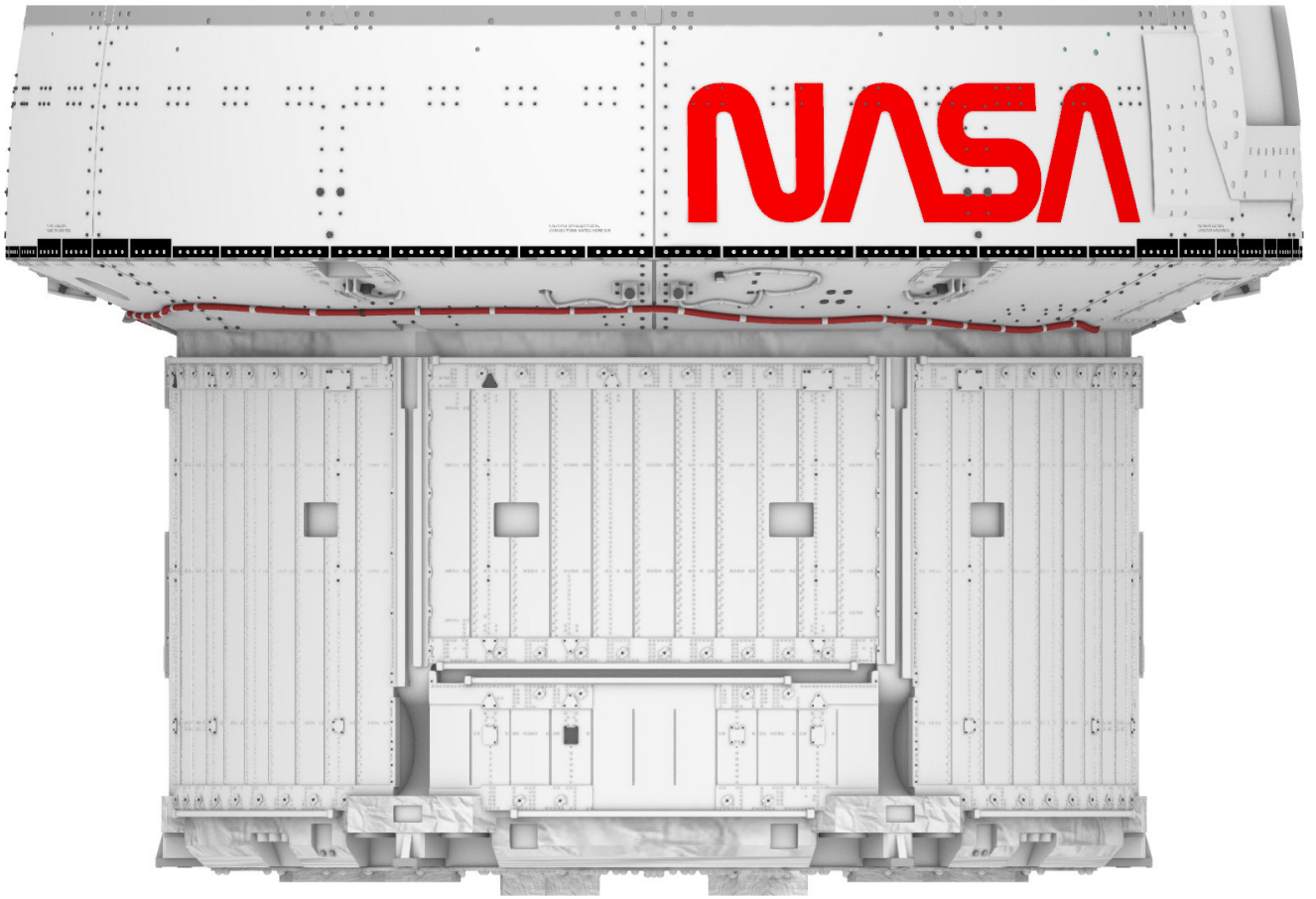


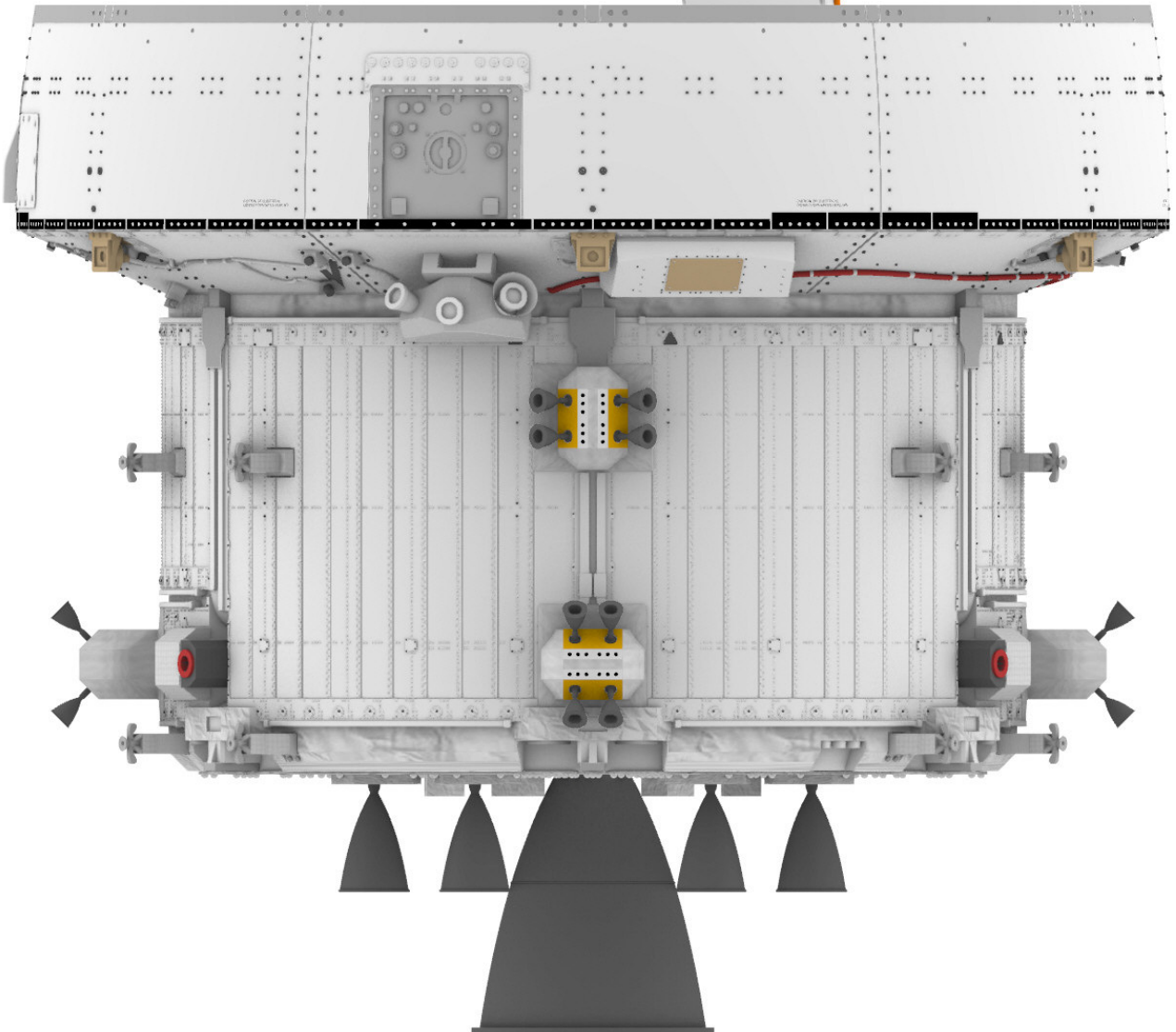
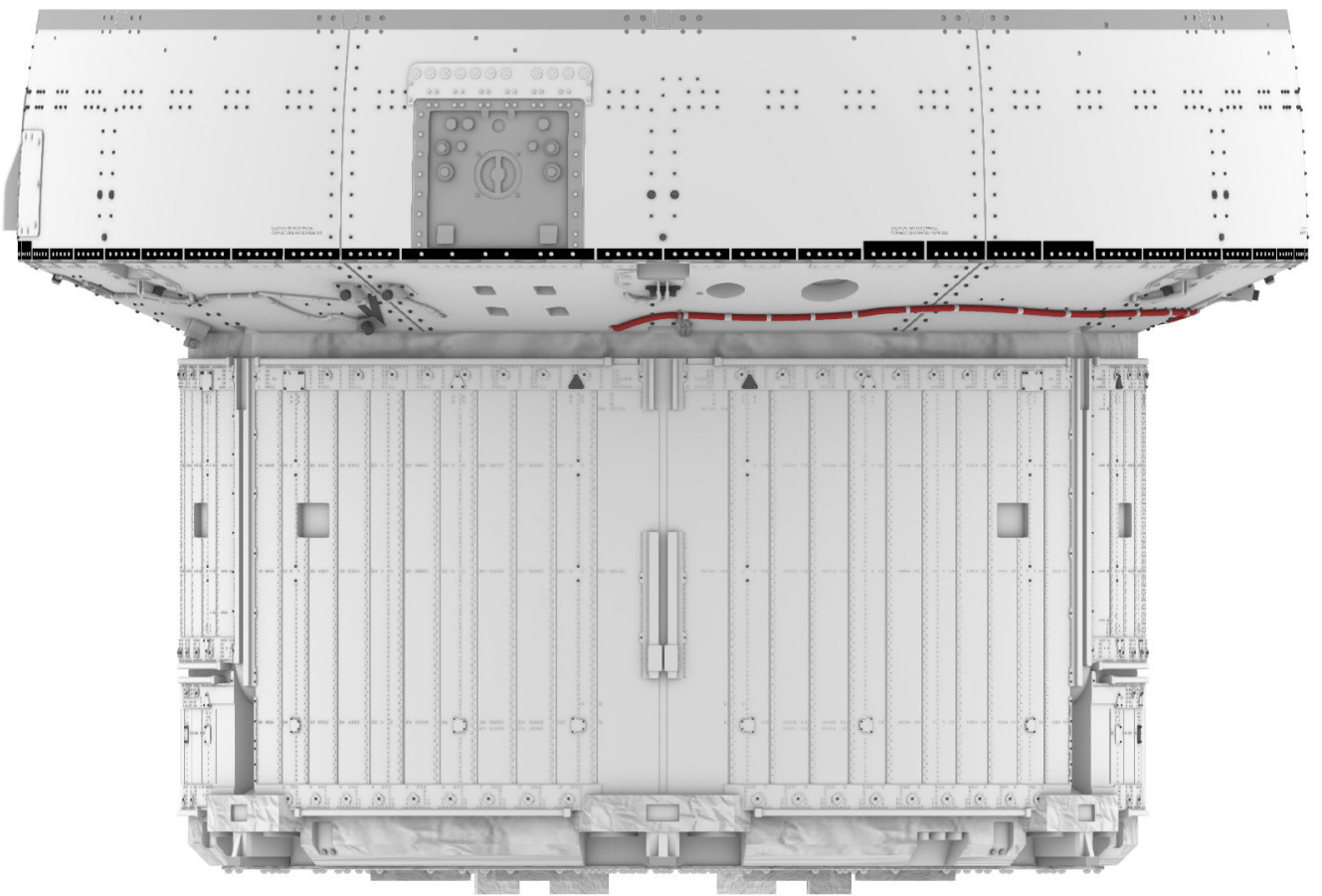
The umbilical is fixed on the CM-SM adapter. At this stage it is advisable not to glue this part as it may be necessary to adjust it with the command module.

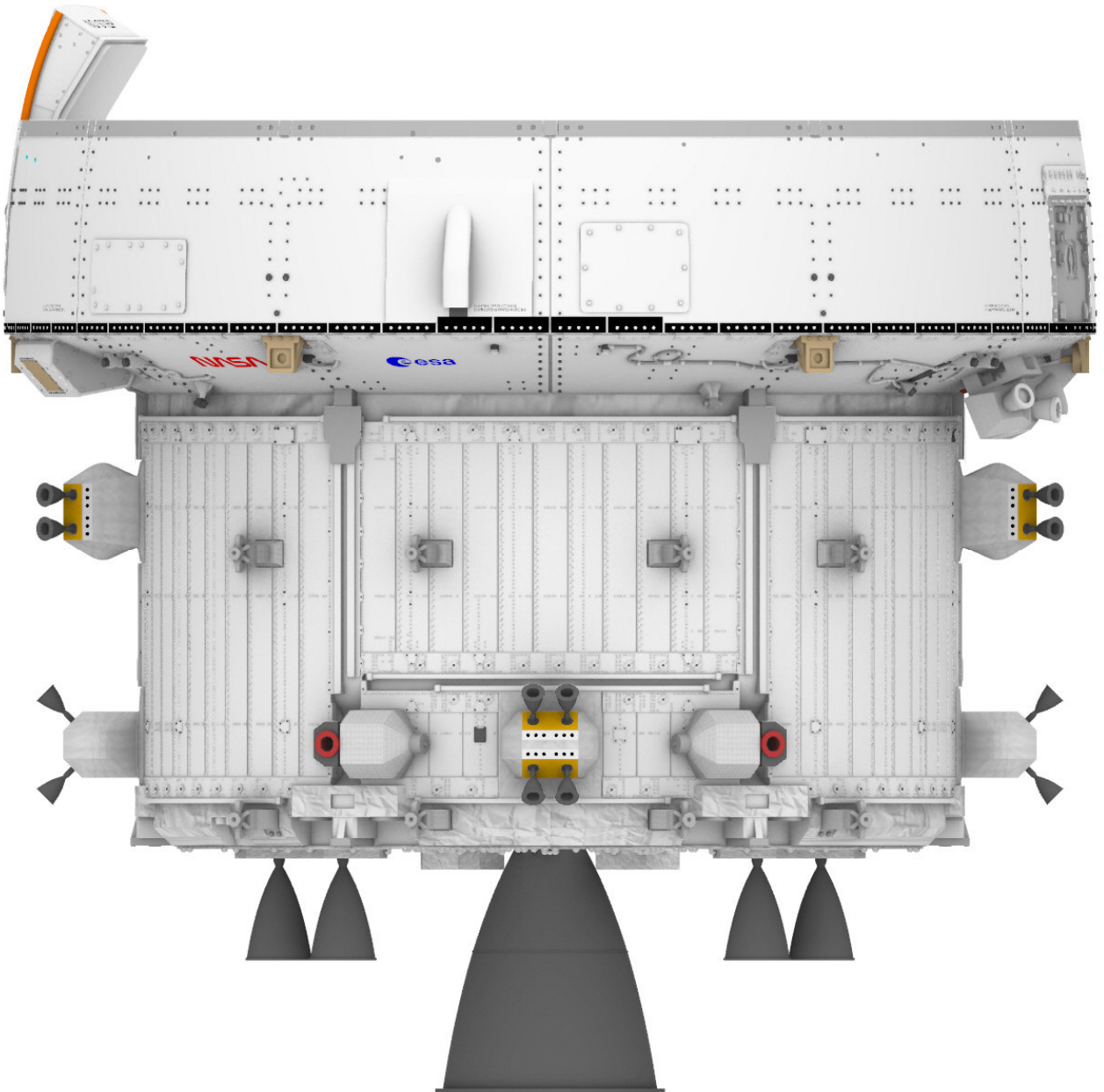
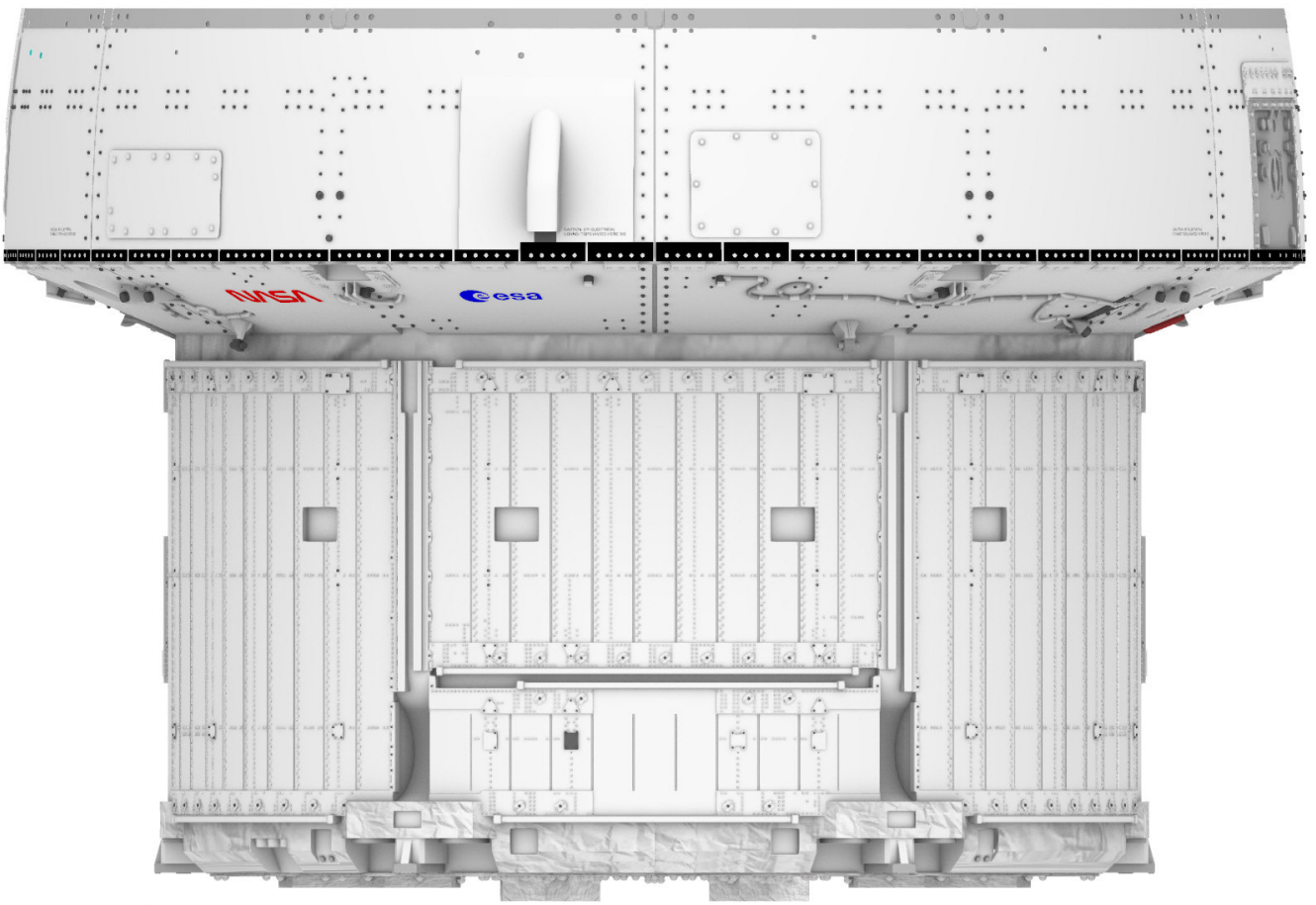


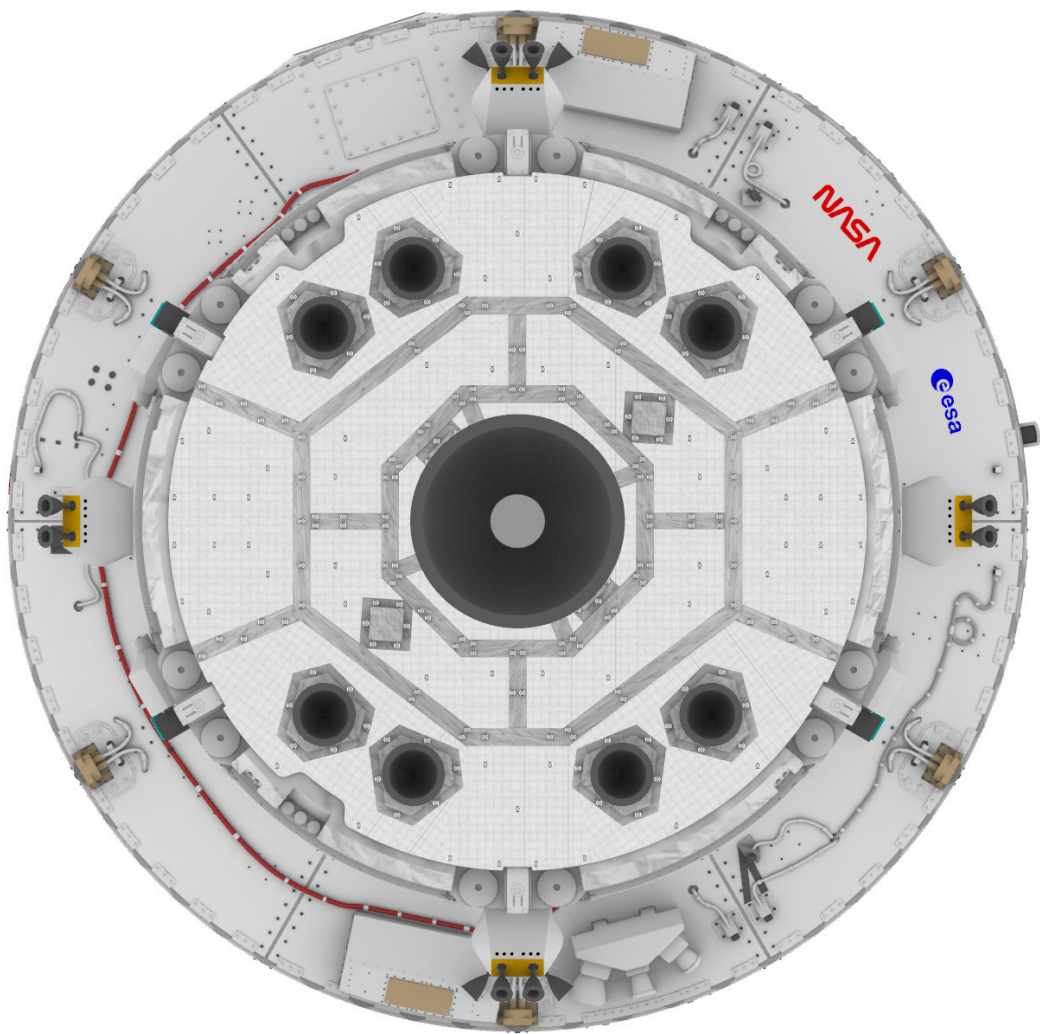
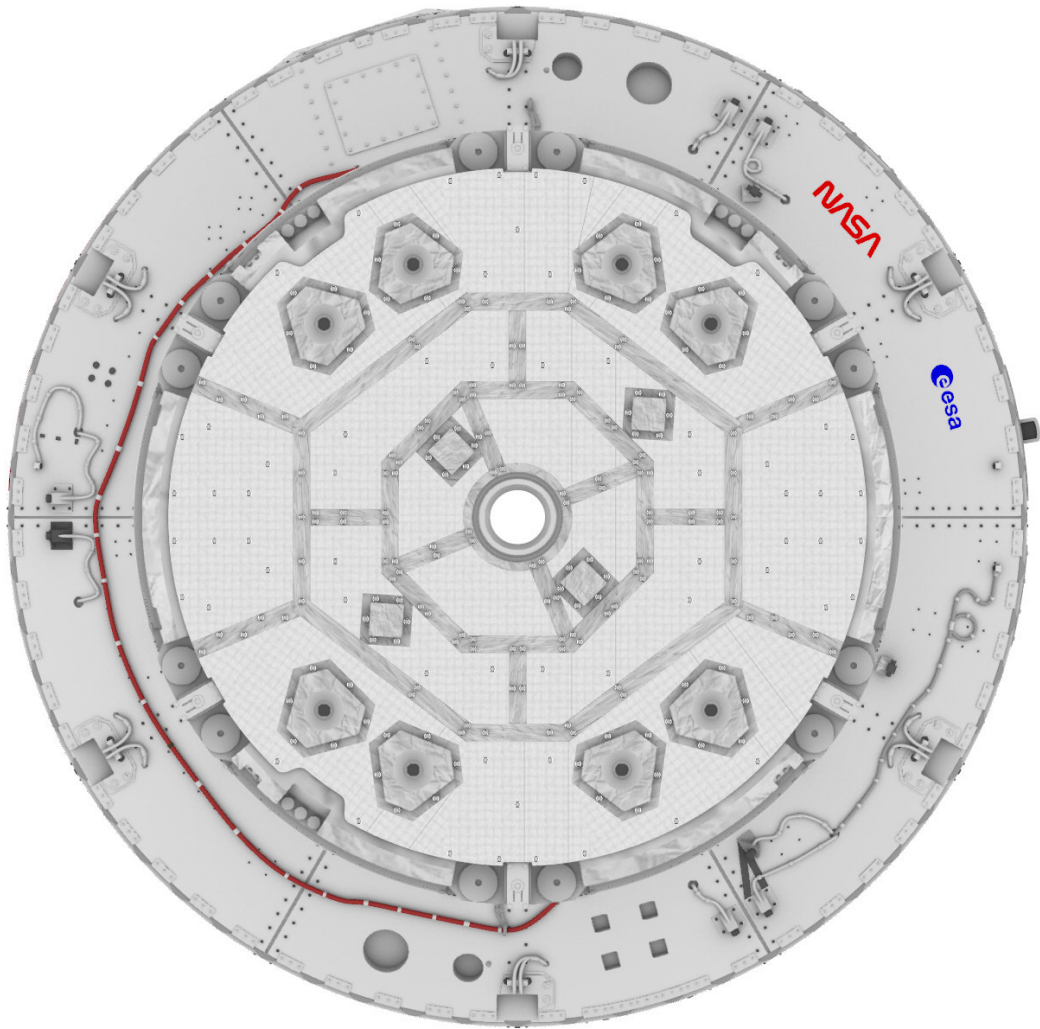
S-48 is cut in adhesive aluminium paper .

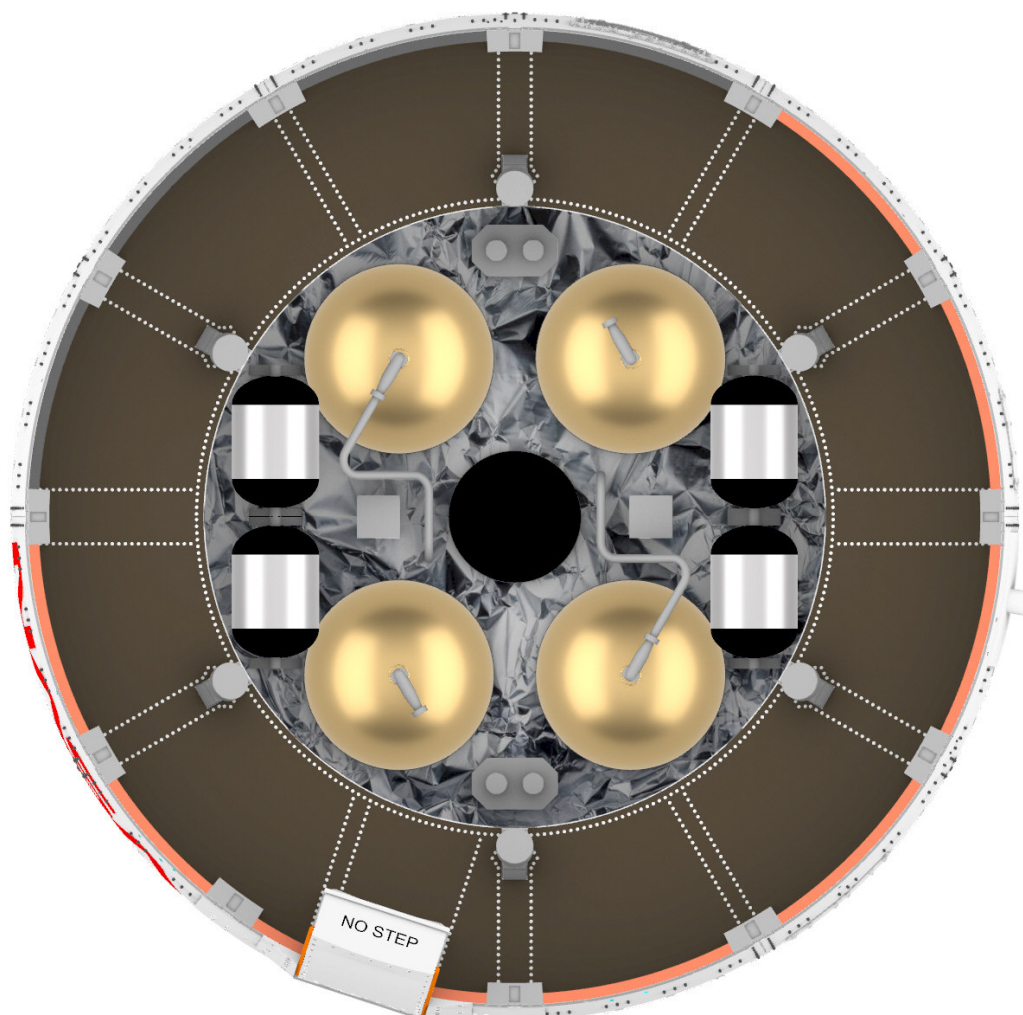
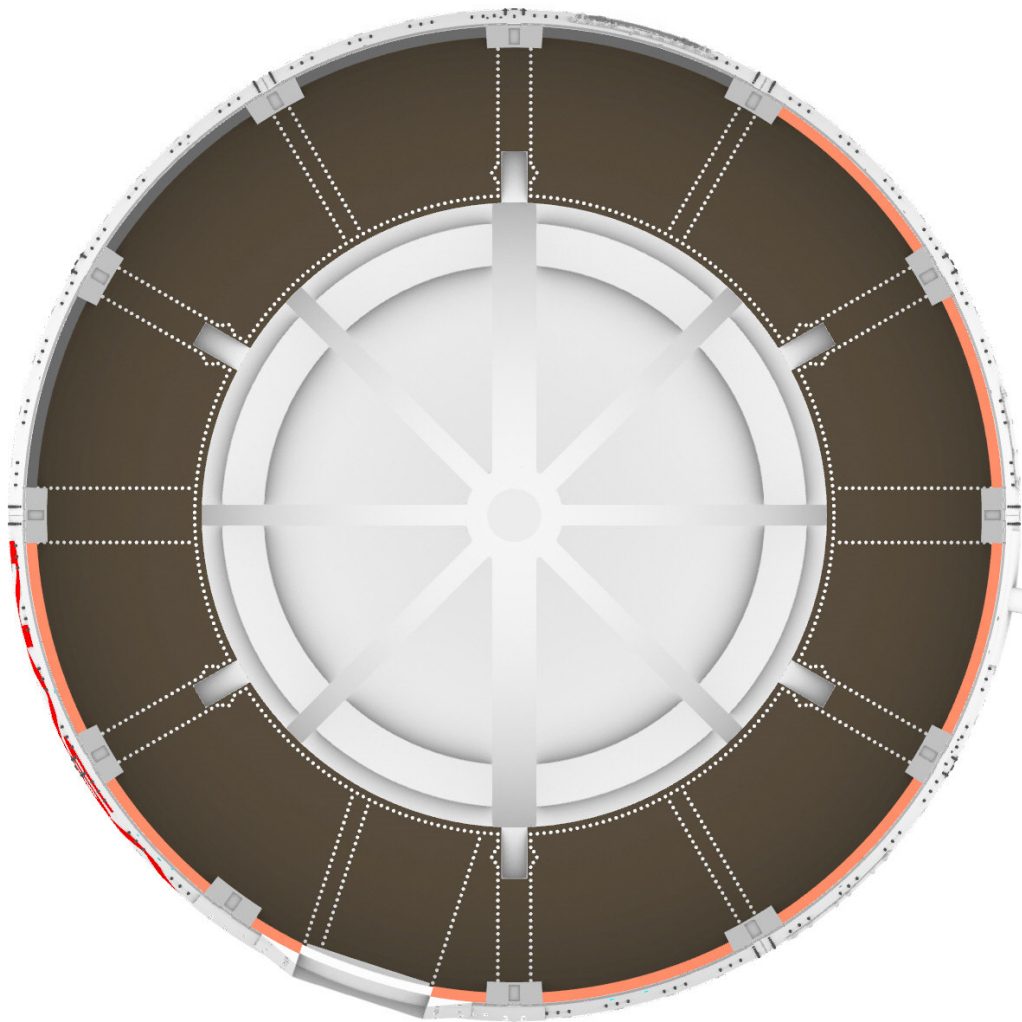






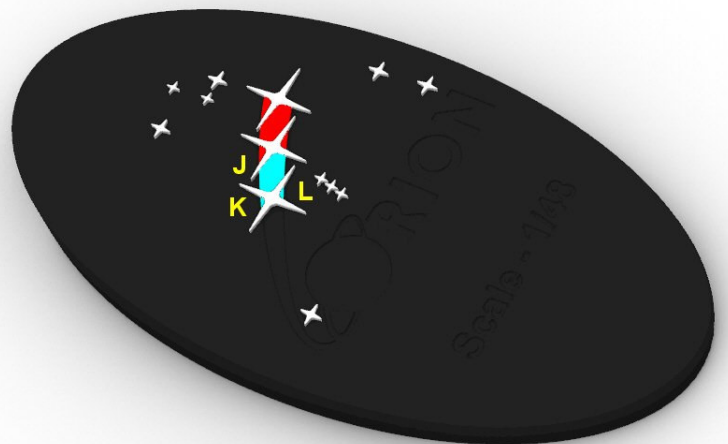
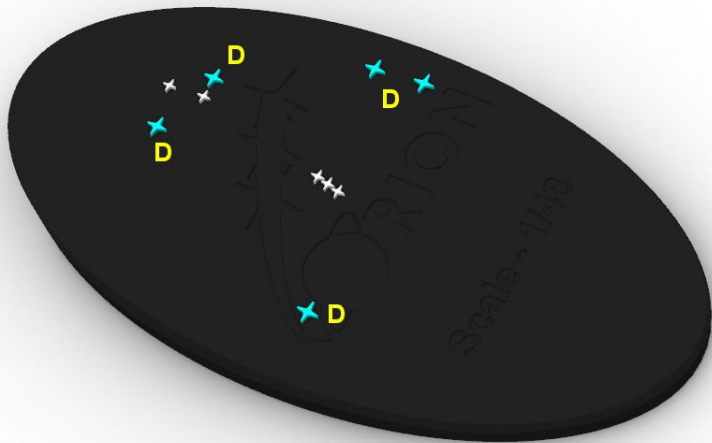
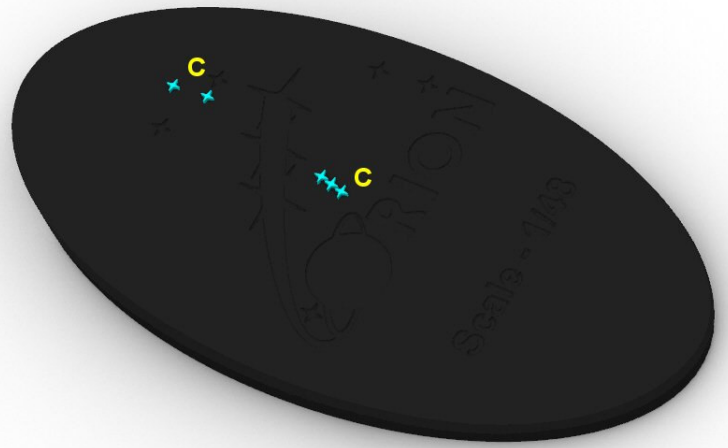
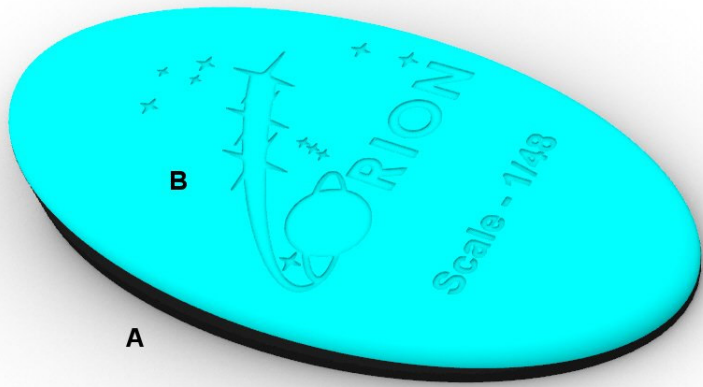


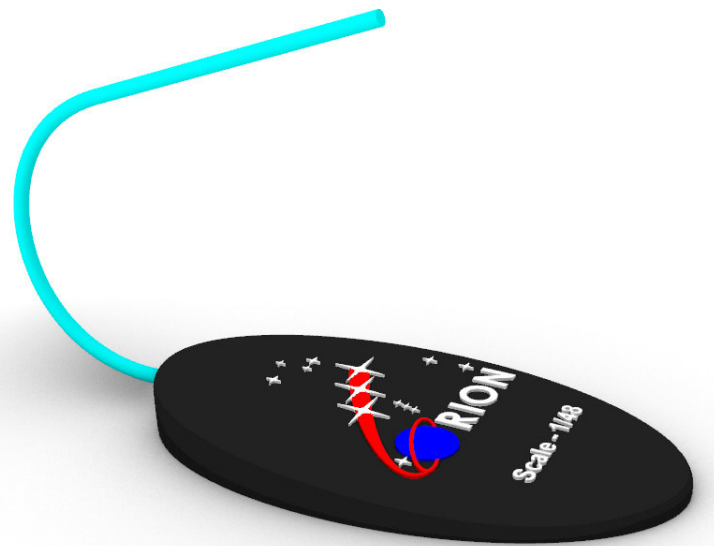
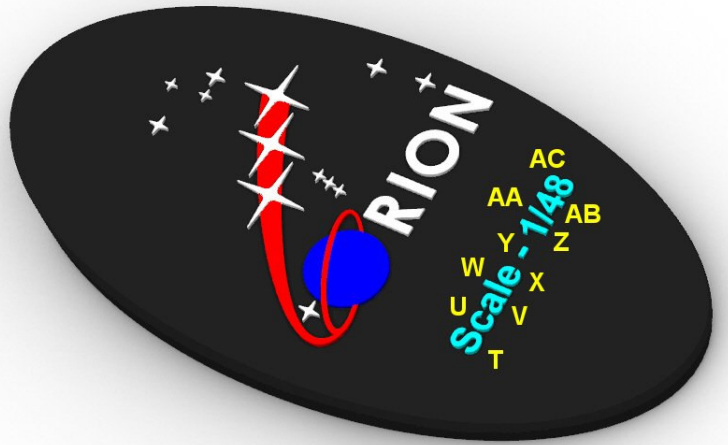
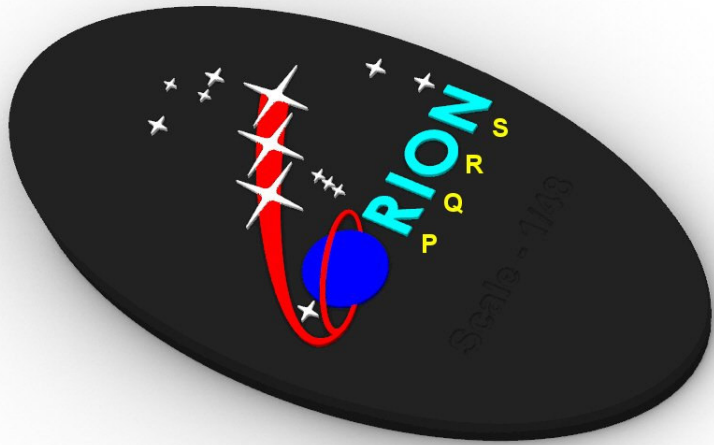
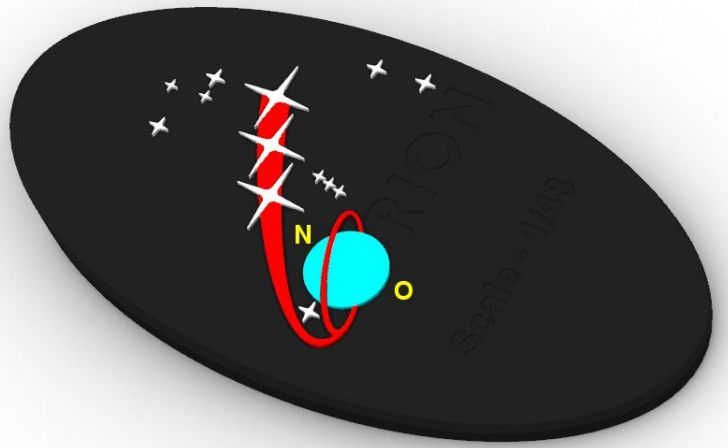
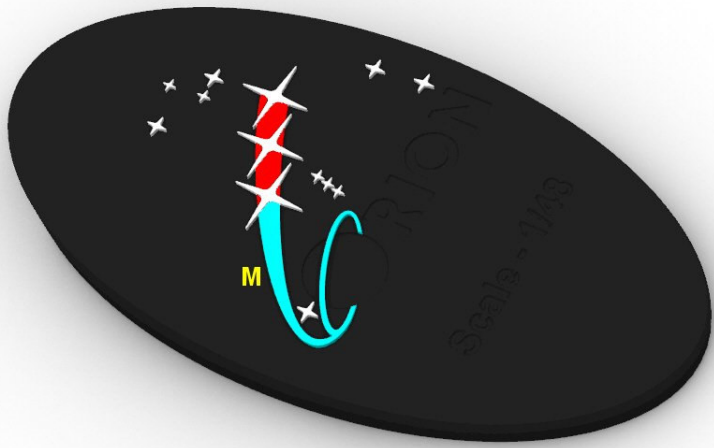




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stand





Refer to Stand.pdf for a pattern you can use for the 6 mm diameter rod.