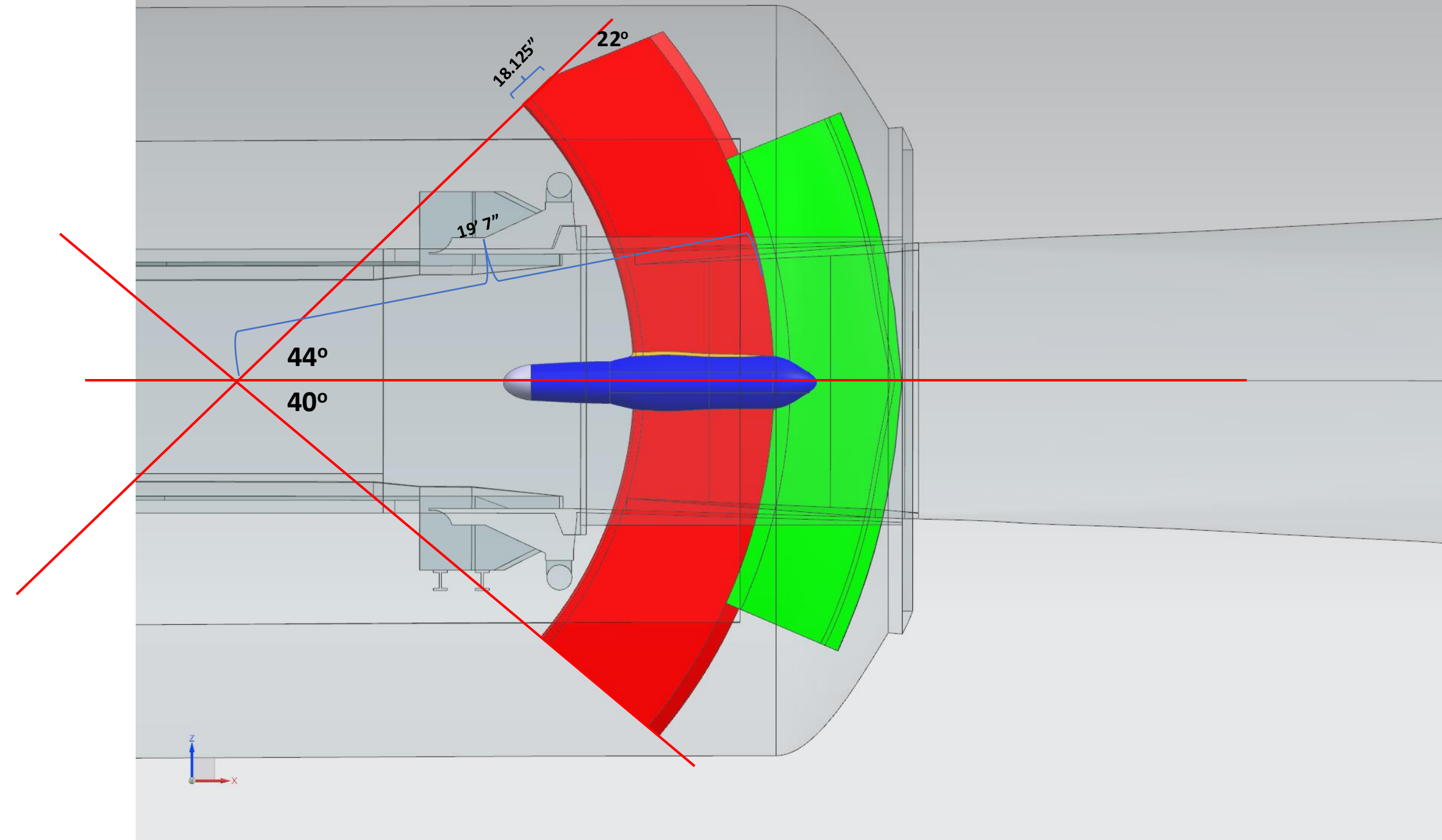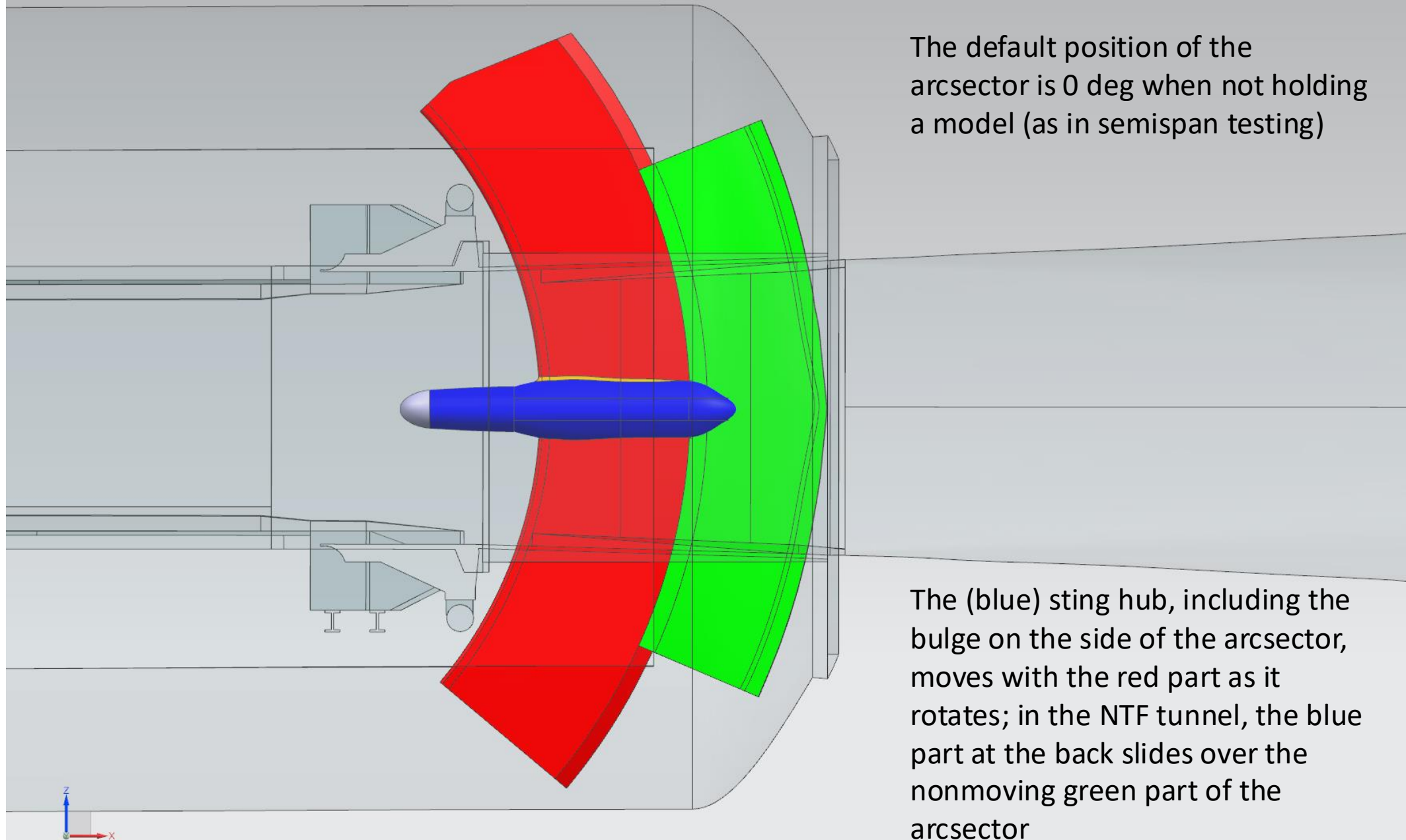# NTF Arcsector Rotation Sketches

To aid CFD when modeling the tunnel

(This set of slides is part of the NTF high-speed leg CAD package, available for distribution)

0 deg

22°

18.125"

19' 7"

44°

40°

0 deg

The default position of the
arcsector is 0 deg when not holding
a model (as in semispan testing)

The (blue) sting hub, including the
bulge on the side of the arcsector,
moves with the red part as it
rotates; in the NTF tunnel, the blue
part at the back slides over the
nonmoving green part of the
arcsector

3

+19 deg

The arcsector can rotate down as far as 19 deg (defined as +19 deg). Its bulge and part of the sting hub extend below the floor... in reality, two spring-loaded floor plates hinge out of the way to allow this.

The CAD arcsector can penetrate the outer plenum shell... in reality, the outer shell has a protrusion (left out of the CAD) that the arcsector can fit into

4

These doors hinge down
(out of the way)
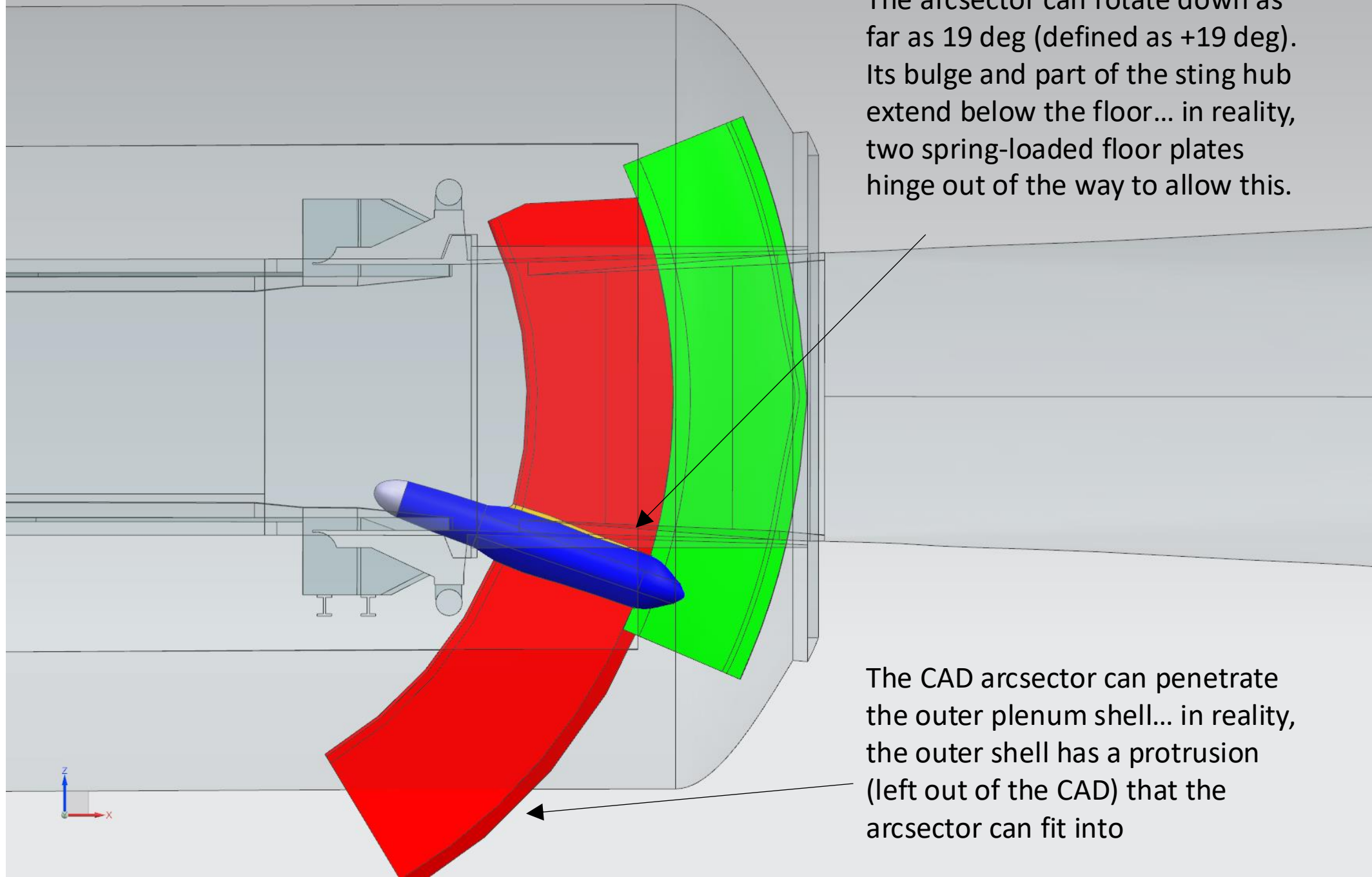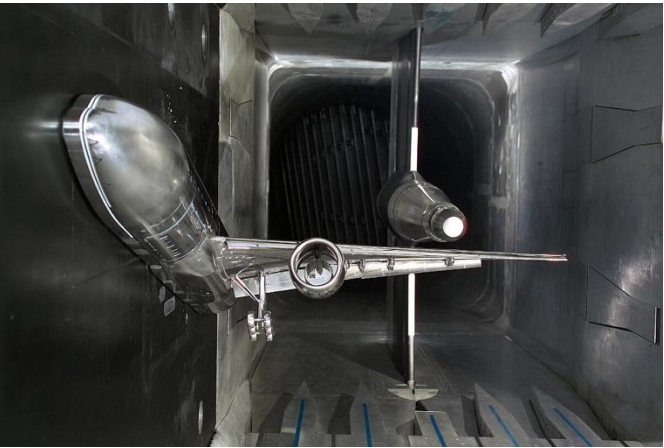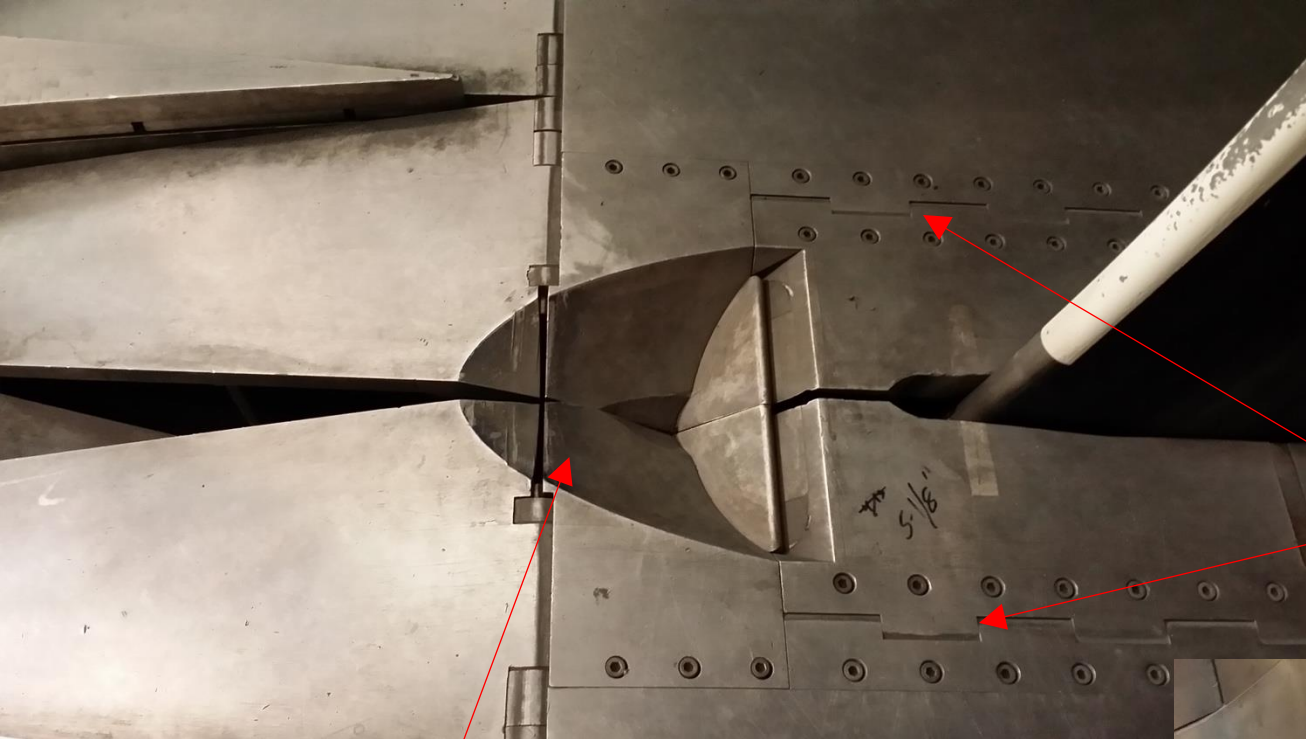
5

Hinges drop the side plates down to make room for the "bulges" on the side of the arcsector to pass through the floor when rotated down

Part of the sting hub nestles in here when rotated down to its maximum 19 deg (this indentation is not included in the current CAD)

-11 deg

The CAD arcsector can penetrate the outer plenum shell… in reality, the outer shell has a protrusion (left out of the CAD) that the arcsector can fit into

The arcsector can rotate up as far as 11 deg (defined as -11 deg)