

# Subaru Telescope: Pattern

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Canon



<http://www.canon.com/c-park/en/>



View of completed model

Subaru Telescope scale: 1/300

Editor: NAOJ

Japan's optical telescope discovers the farthest galaxy yet known, 12.8 billions of light years distant. Located on the summit of Mauna Kea in Hawaii, the National Astronomical Observatory of Japan began astronomical observations in 1999. An altitude of 4,200 m, a dry atmosphere, and low atmospheric pressure make the summit of Mauna Kea one of the world's best places for astronomical observations. Based on the results of water flow tests, the Subaru Telescope was designed to allow efficient discharge of internal heat without taking in the outside air. It features a dome with a distinctive cylindrical shape.

\*This model was designed for Papercraft and may differ from the original in some respects.

■ Parts list(pattern):Eleven A4 sheets(No.1 to No.11)

■ No. of Parts:60

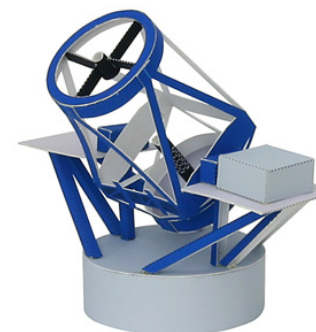
\* Build the model by carefully reading the Assembly Instructions, in the parts sheet page order.



Front



Side

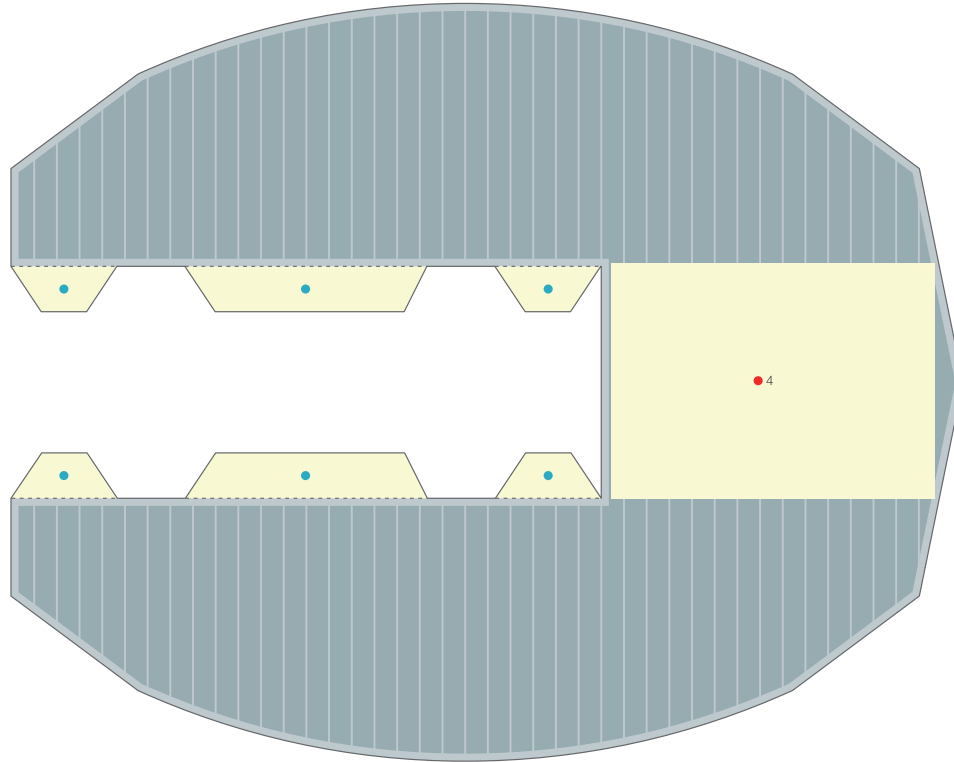


Photograph of the completed telescope



Front view of the telescope

1 Ceiling of elliptical cylinder dome



2

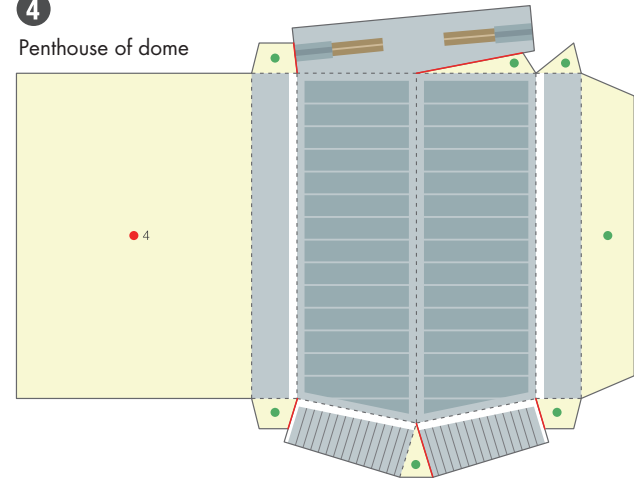


3



4

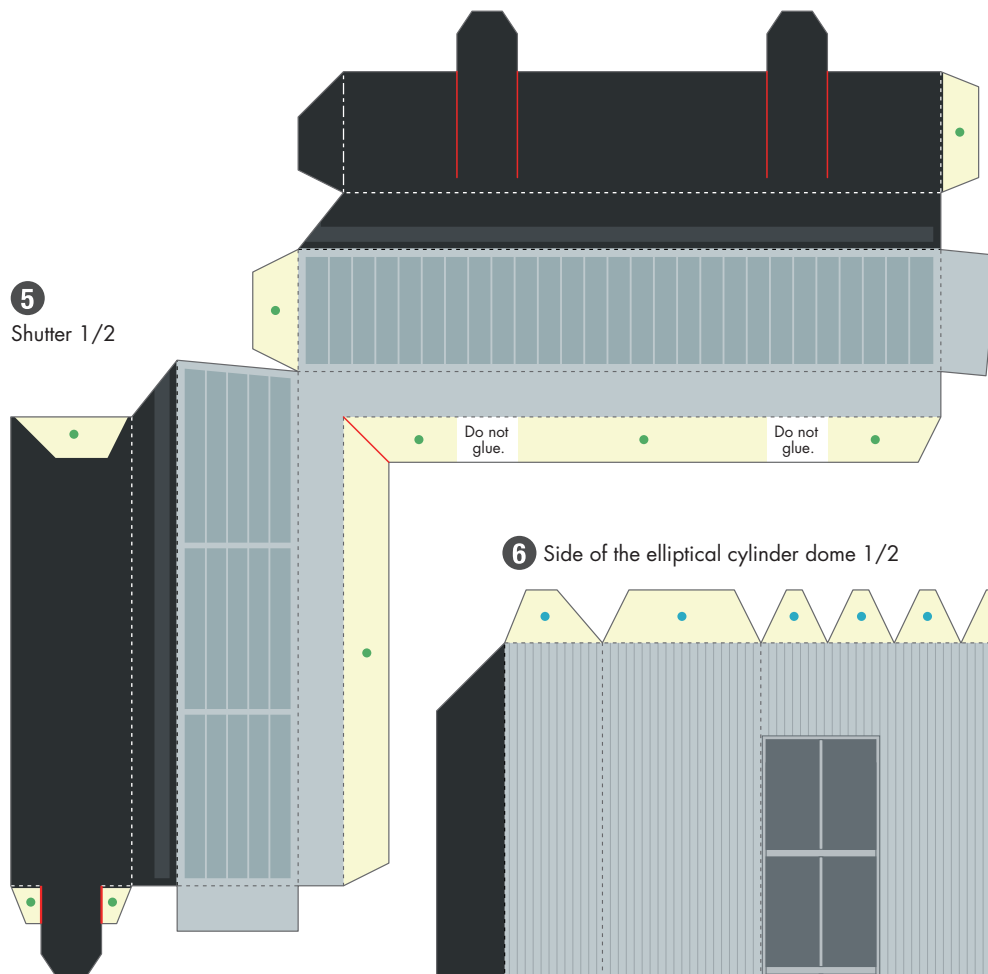
Penthouse of dome



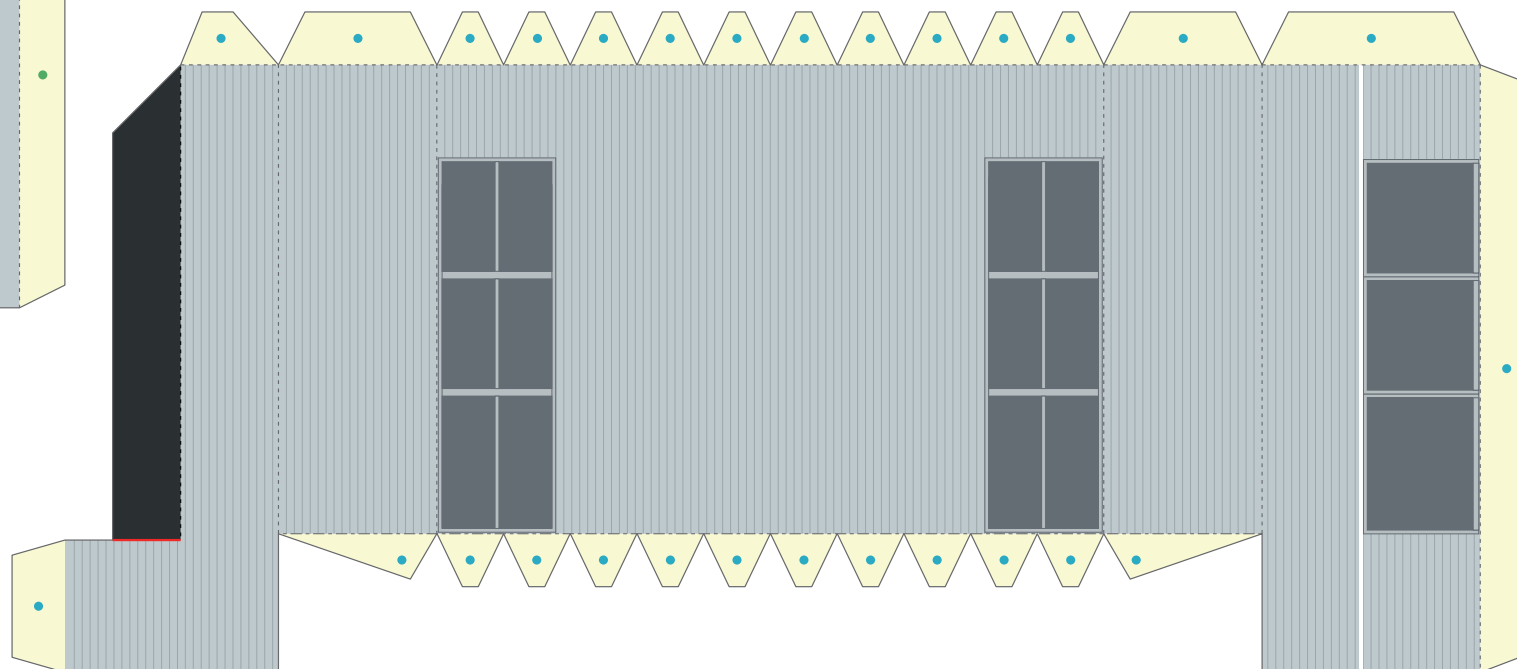
60

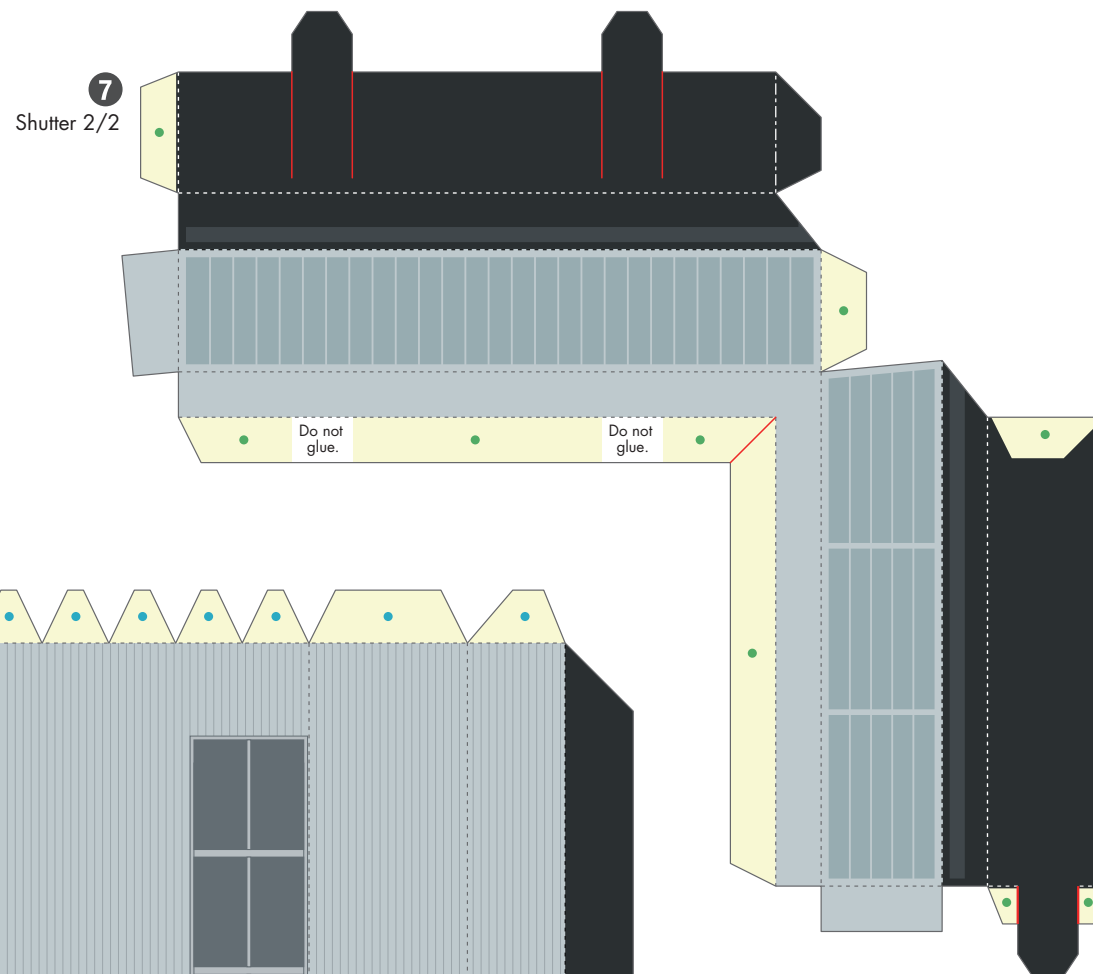


**5**  
Shutter 1/2

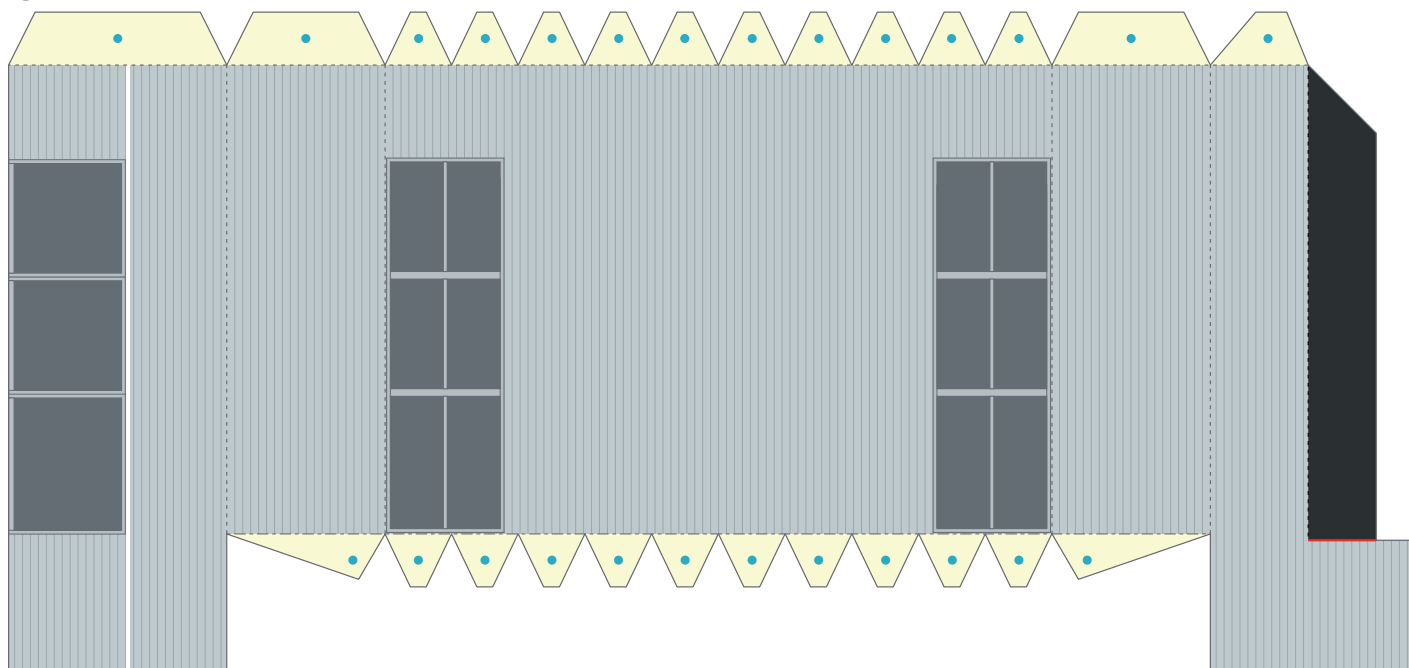


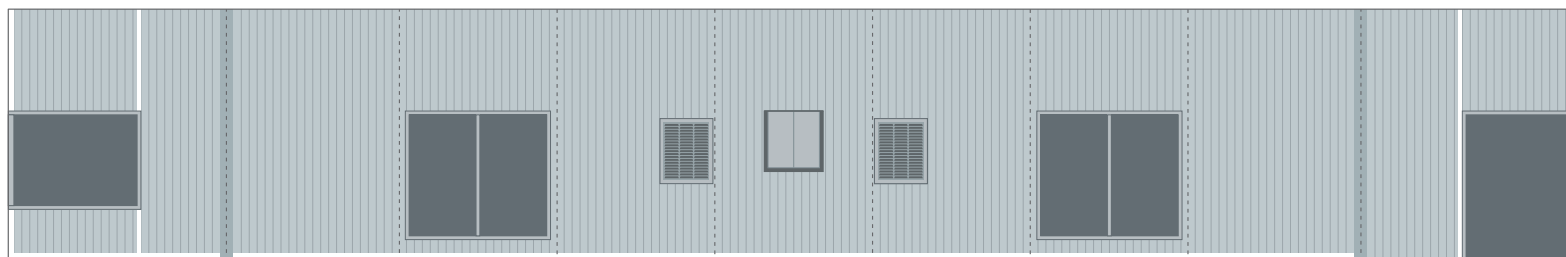
**6** Side of the elliptical cylinder dome 1/2





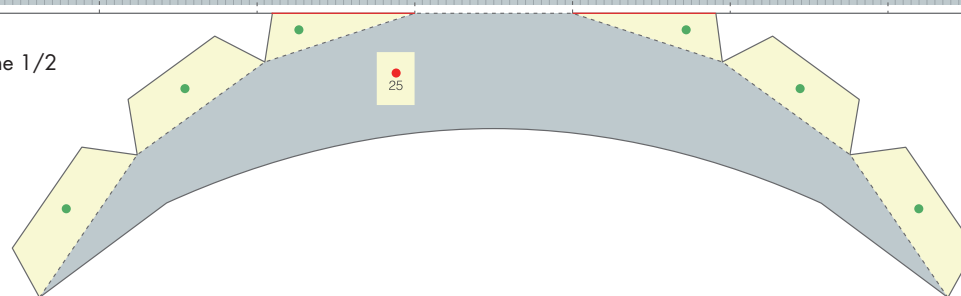
**8** Side of the elliptical cylinder dome 2/2





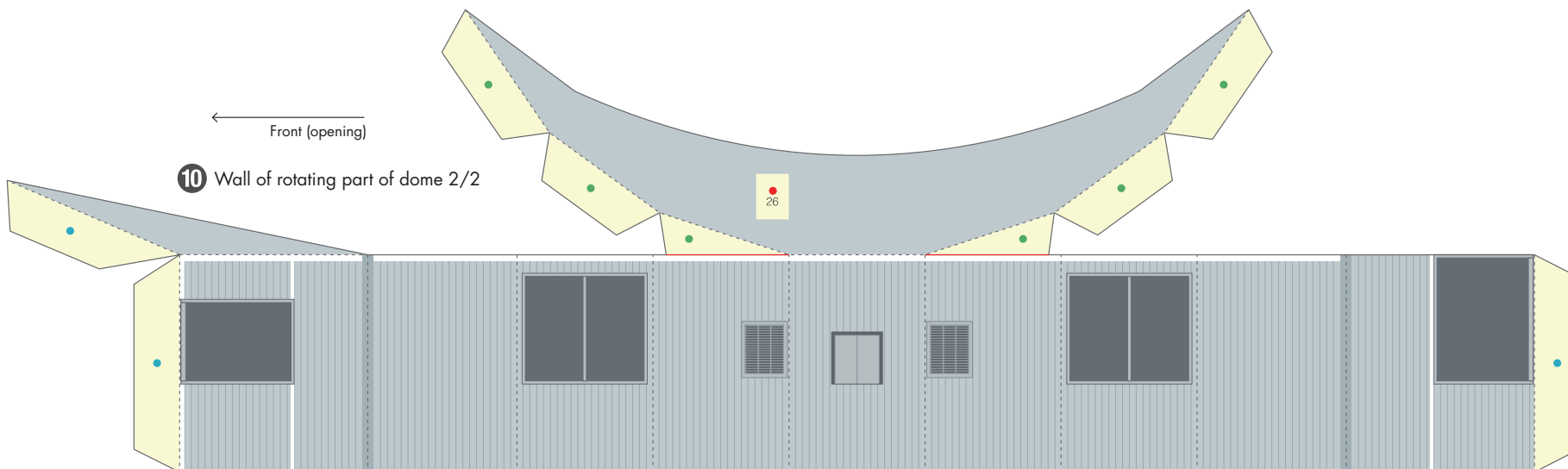
**9** Wall of rotating part of dome 1/2

← Front (opening)



← Front (opening)

**10** Wall of rotating part of dome 2/2



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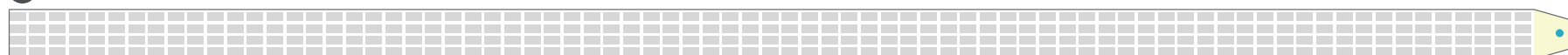
11 Wall of ventilation floor of the dome 1/2



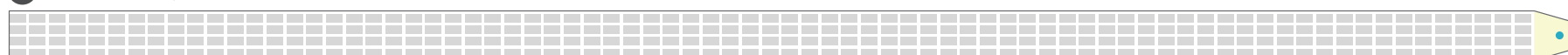
12 Wall of ventilation floor of the dome 2/2



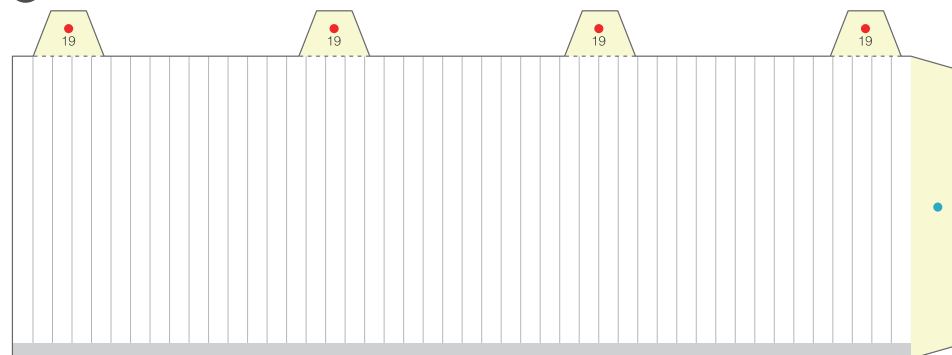
13 Catwalk fence 1/2



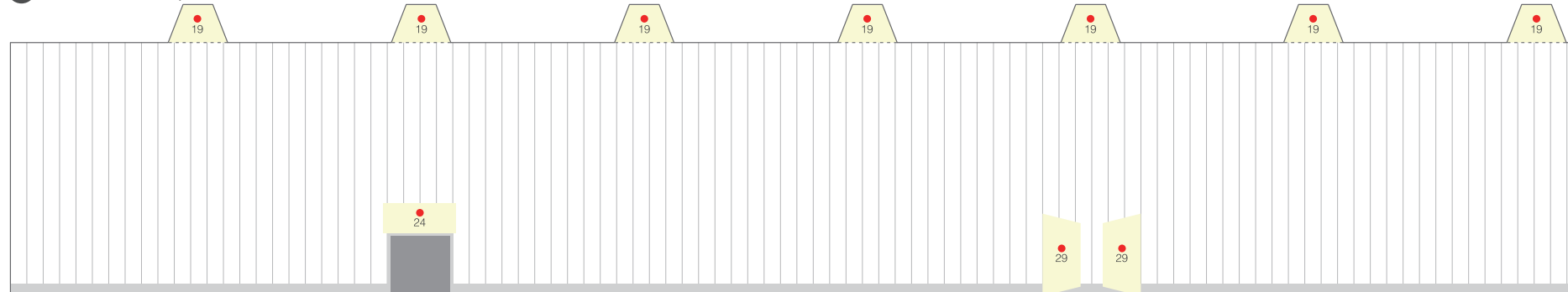
14 Catwalk fence 2/2



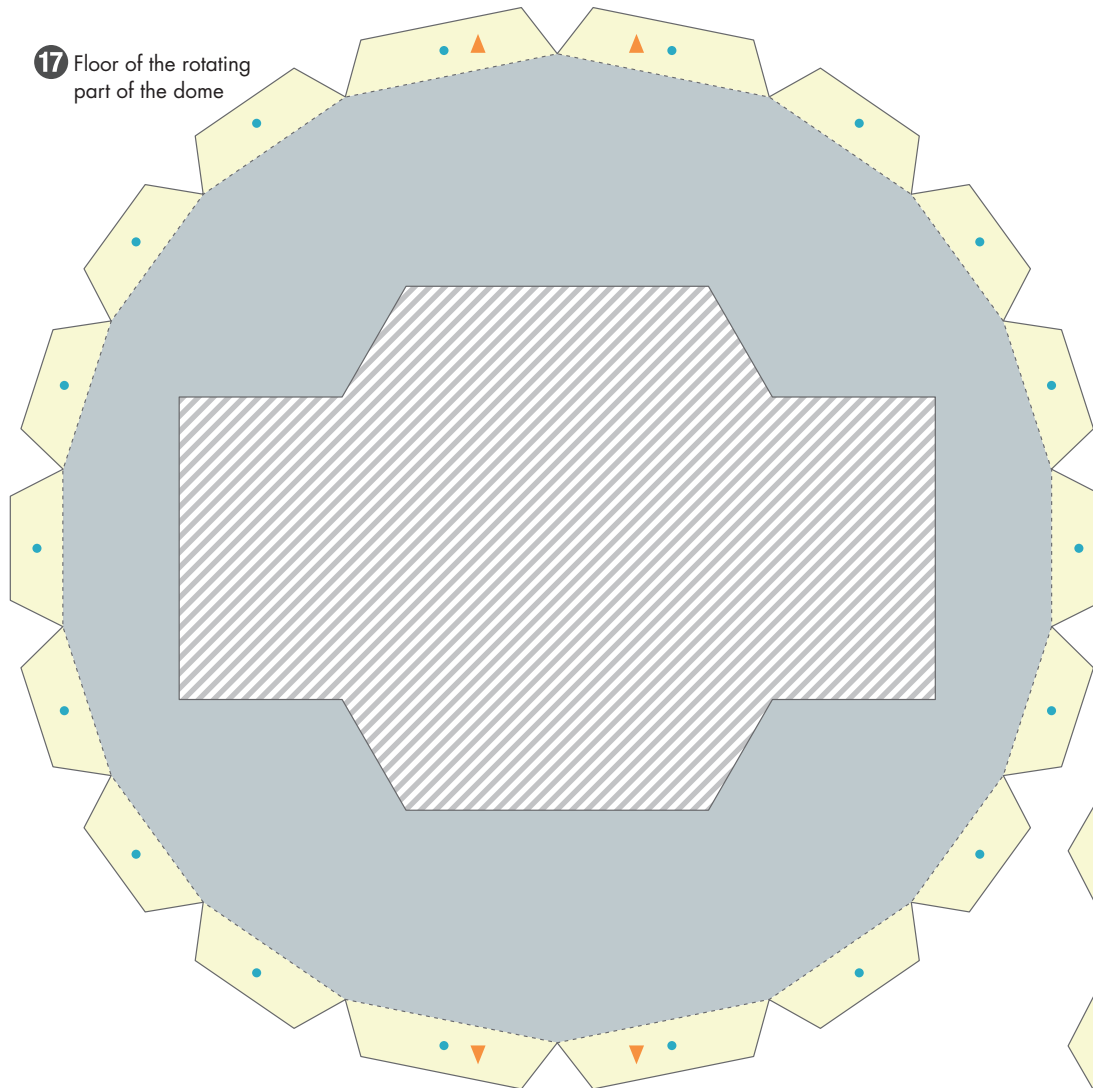
15 Wall of the lower part of the dome 1/2



16 Wall of the lower part of the dome 2/2



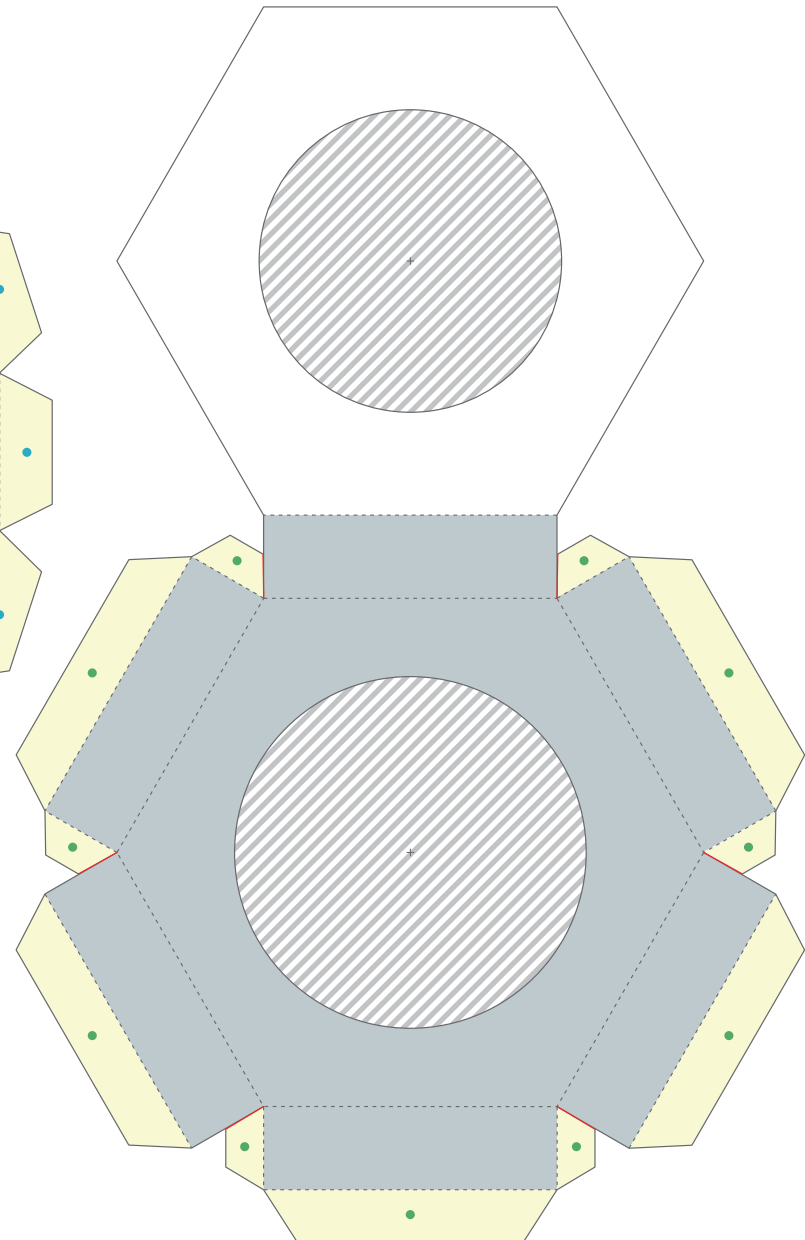
**17** Floor of the rotating part of the dome



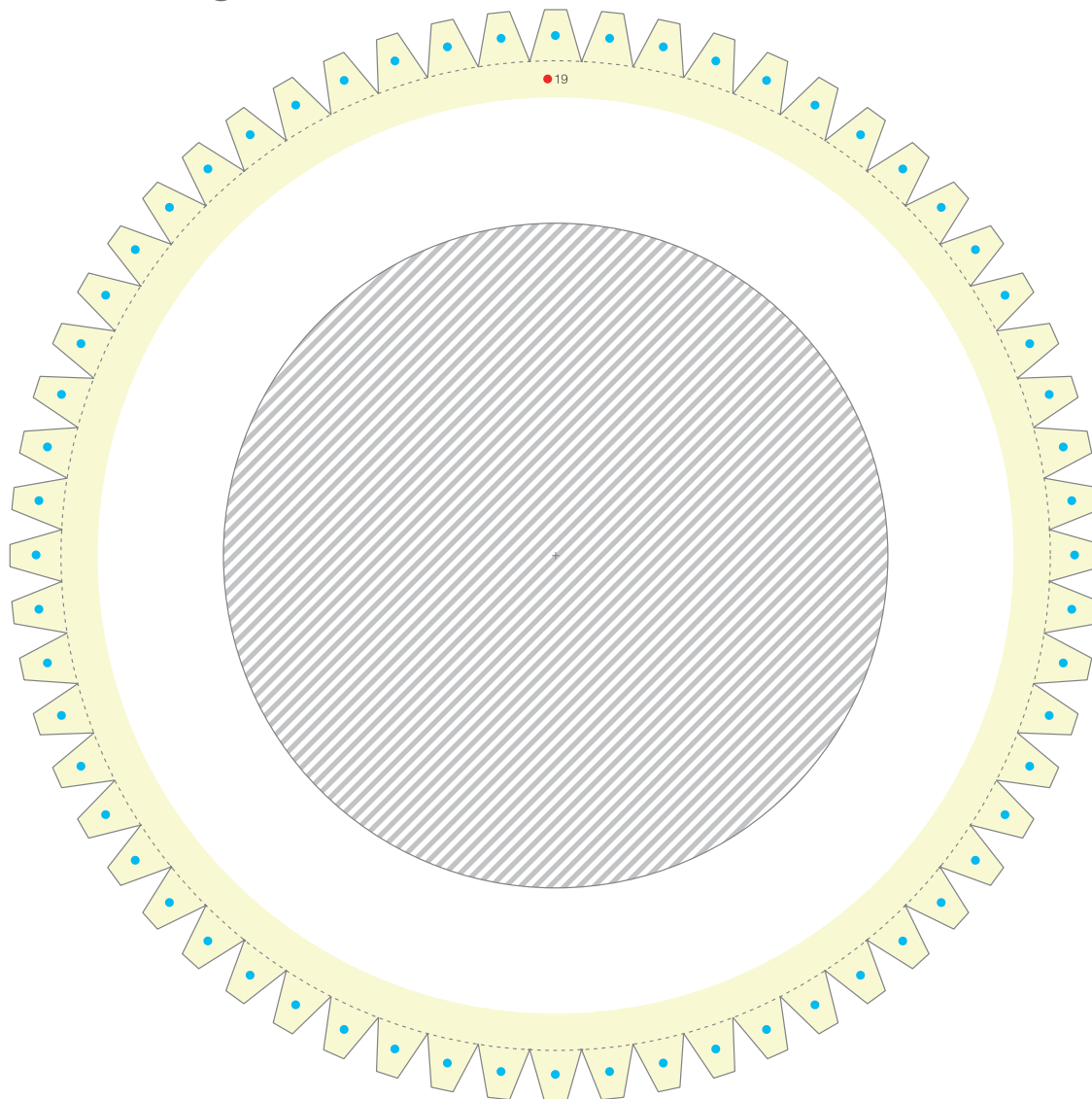
Flaps to which glue is to be applied marked with ▼ & ▼ face the front side and backside.



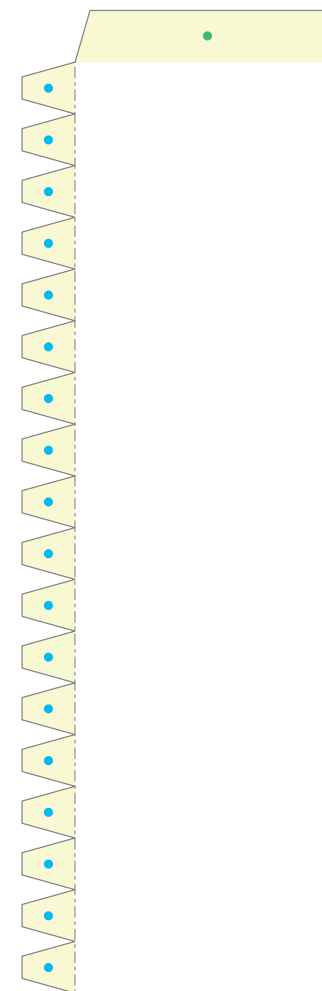
**18** Setting part for the telescope (Not part of the actual Subaru)



19 Floor of the ventilation floor of the dome

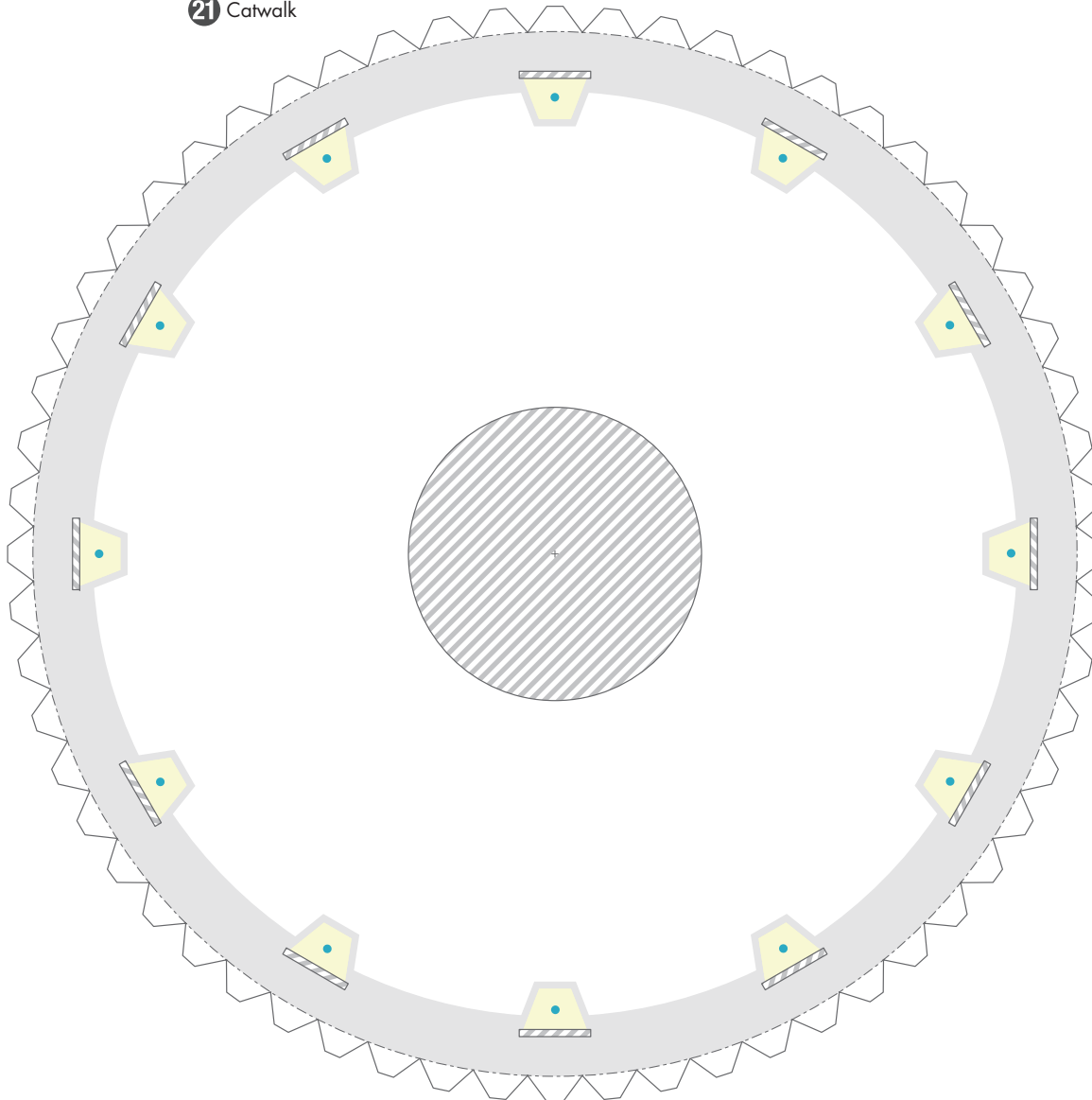


20 Setting part for the telescope  
(Not part of the actual Subaru)

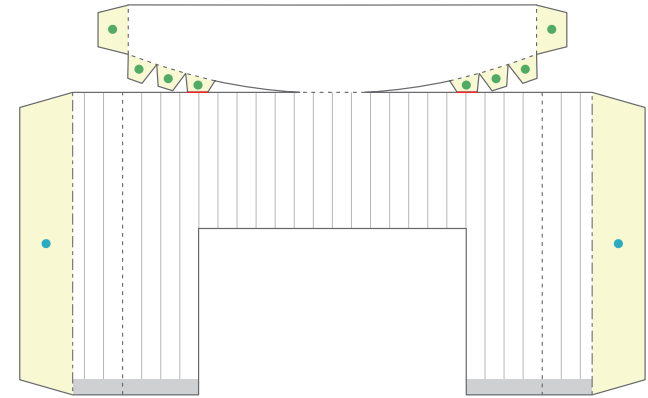




**21** Catwalk



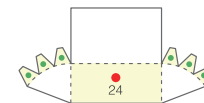
**22** Large carry-in entrance



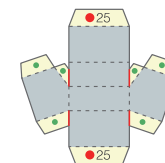
**23** Shutter for large carry-in entrance



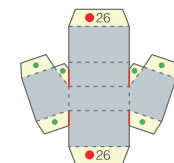
**24** Roof for small carry-in entrance



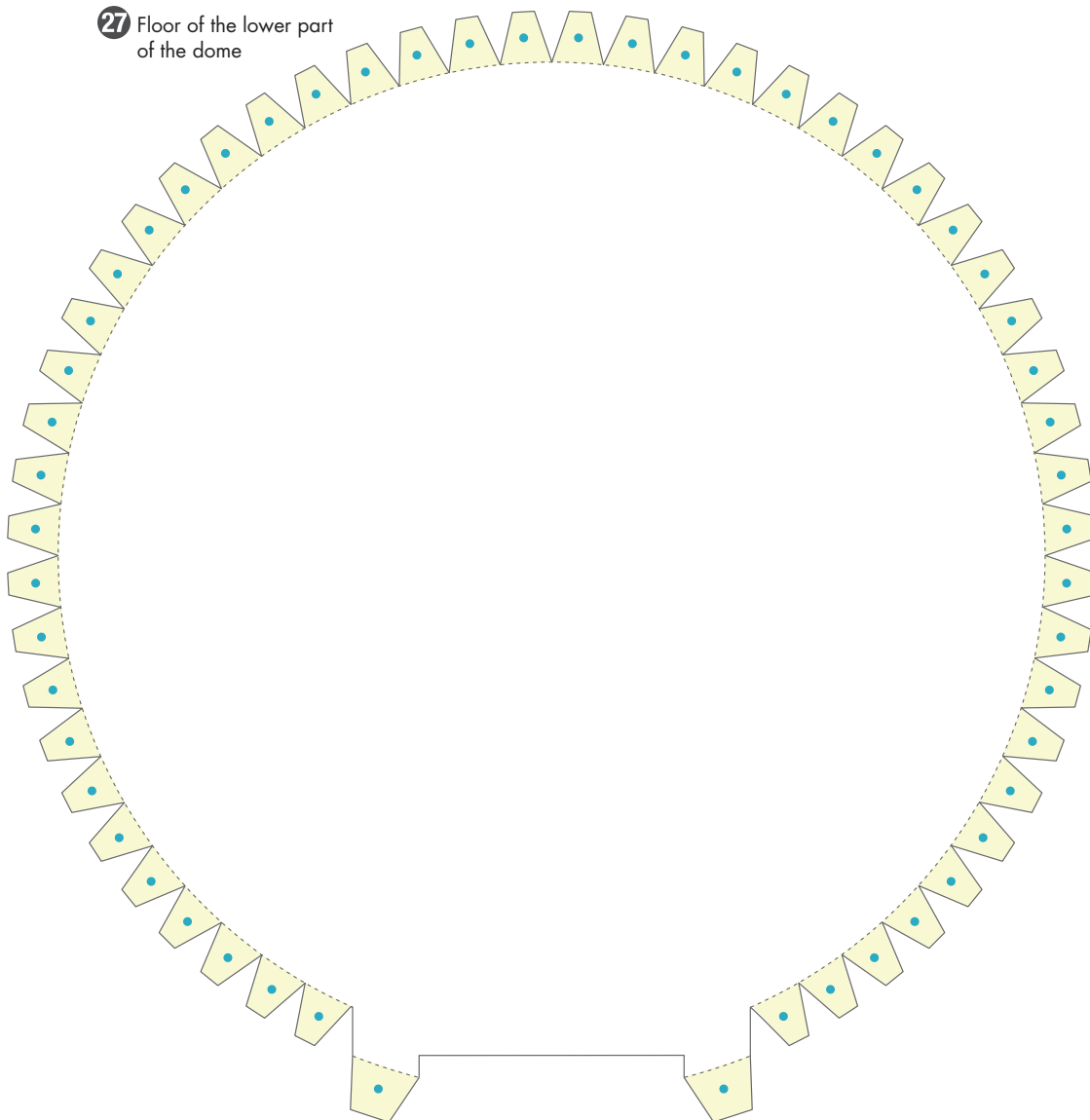
**25** Hatch for shoulder of dome



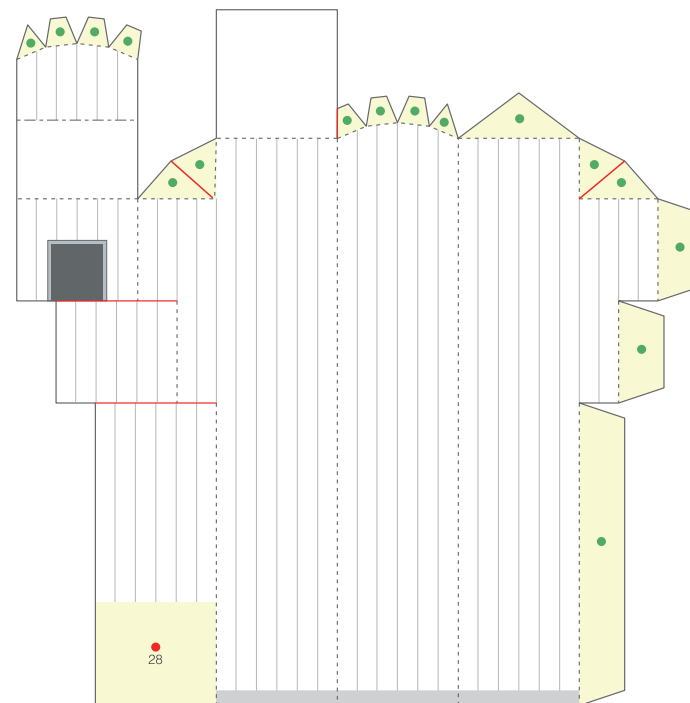
**26** Hatch for shoulder of dome



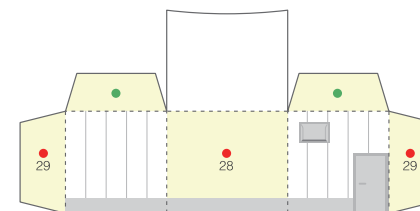
27 Floor of the lower part of the dome



28 External elevator tower



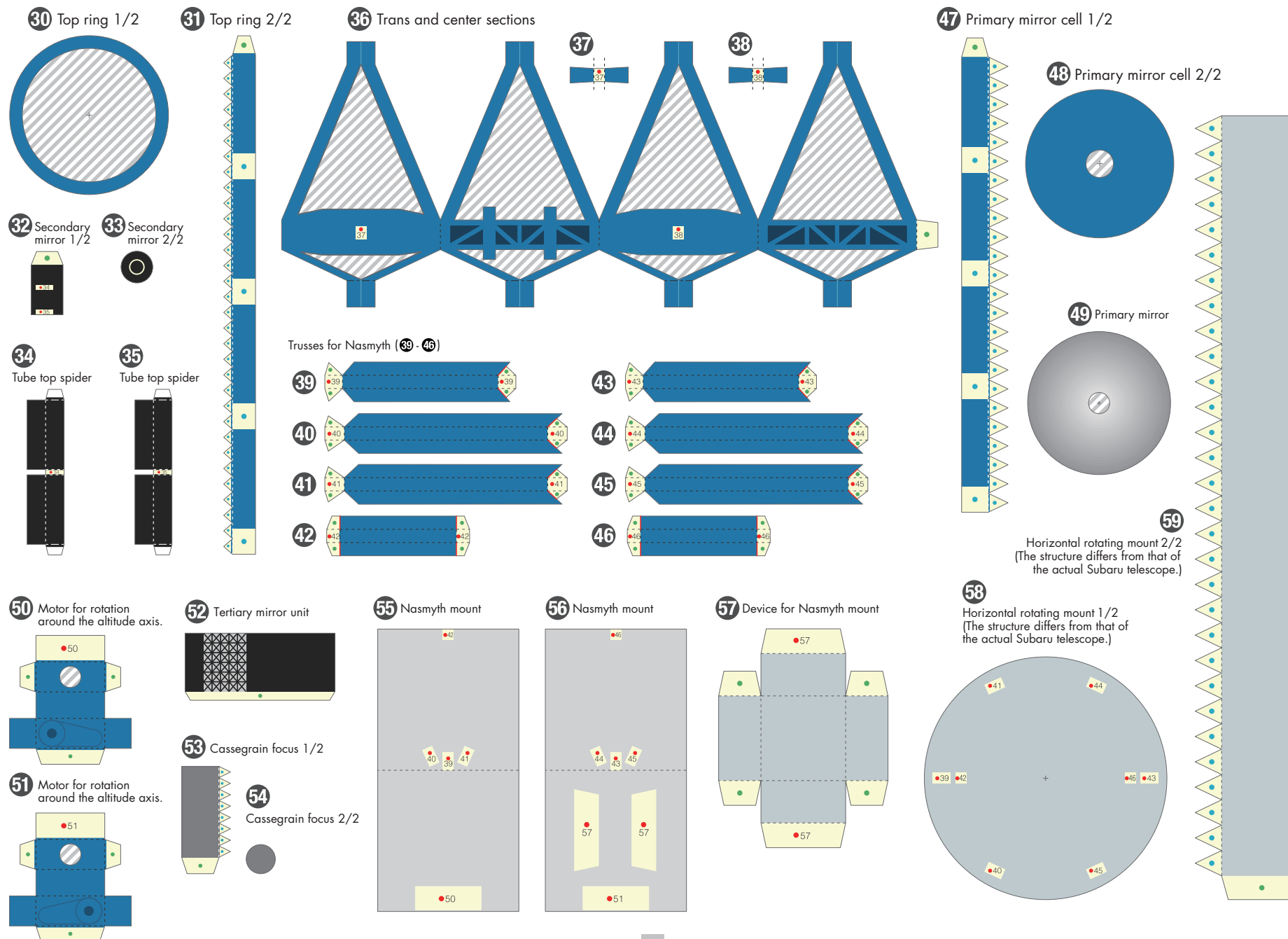
29 First-level entrance for the elevator tower



# Subaru Telescope: Pattern

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# Subaru Telescope: Assembly Instructions

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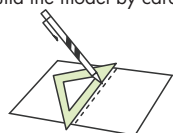


## View of completed model

\*This model was designed for Papercraft and may differ from the original in some respects.

## Assembly Instructions: Six A4 sheets (No. 1 to No. 6)

\*Build the model by carefully reading the Assembly Instructions, in the parts sheet page order.



\*Hint: Trace along the folds with a ruler and an exhausted pen (no ink) to get a sharper, easier fold.

## Assembly Instructions



**Mountain fold(dotted line)**  
Make a mountain fold.



**Valley fold(dashed and dotted line)**  
Make a valley fold.



**Scissors line(solid line)**  
Cut along the line.



**Cut in line(solid line)**  
Cut along the line.

### Tools and materials



Scissors, set square, glue(We recommend stick glue), pencil, used ballpoint pen, toothpicks, tweezers, (useful for handling small parts)

### Assembly tip

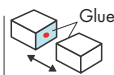


Before gluing, crease the paper along mountain fold and valley fold lines and make sure rounded sections are nice and stiff.

### Caution



Glue, scissors and other tools may be dangerous to young children so be sure to keep them out of the reach of young children.



**Glue**  
The glue spot(colored dot) shows where to apply the glue.



**Glue spot(Red dot)**  
Glue parts with the same number together.



**Glue spot(Green dot)**  
Glue within the same part.

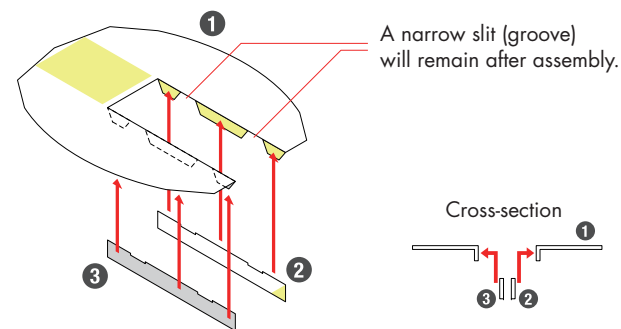


**Glue spot(Blue dot)**  
Glue to the rear of the other part.

## Rules for assembling the Subaru Telescope Paper Craft

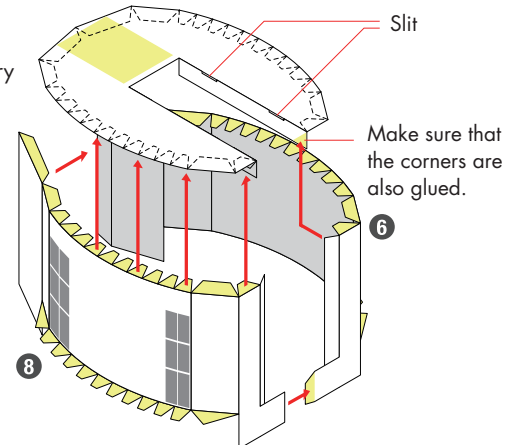
- 1 | Number each part on its backside after cutting out to avoid confusion.
- 2 | Indicates where sections should be glued together.  
 Indicates where to insert sections. Do not glue the sections together.
- 3 | The grey diagonal lines indicate the portion to be cut out. Use a circle cutter to easily cut perfect circles.
- 4 | In the explanatory diagrams, indicates the backside of the paper, while indicates the margins to which glue is applied.

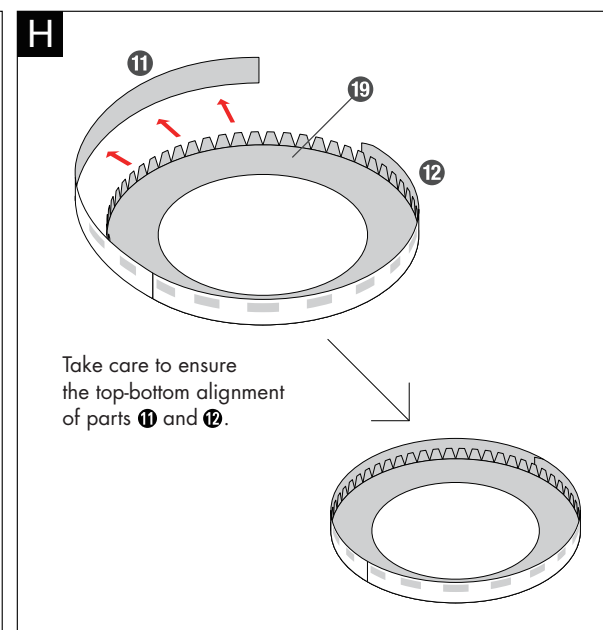
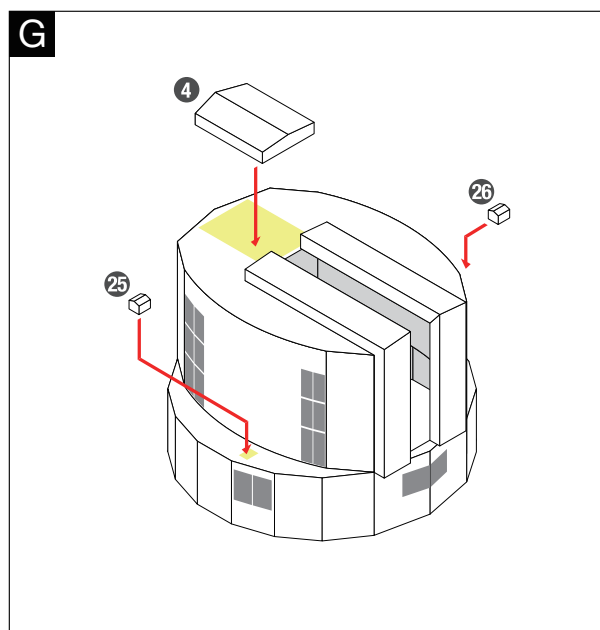
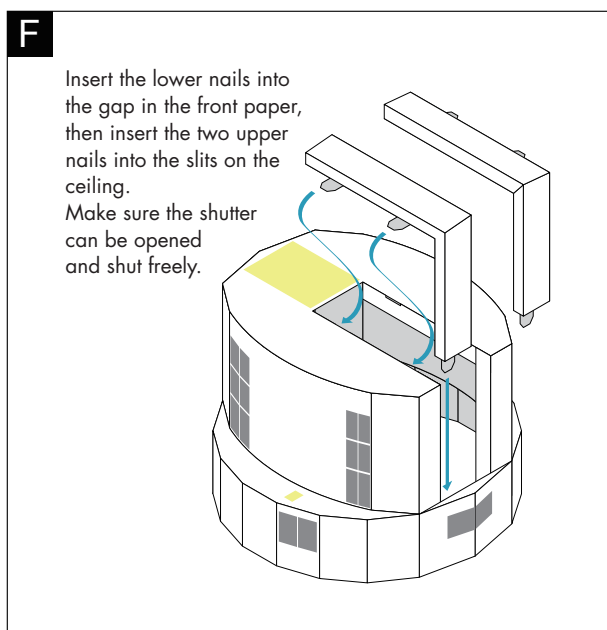
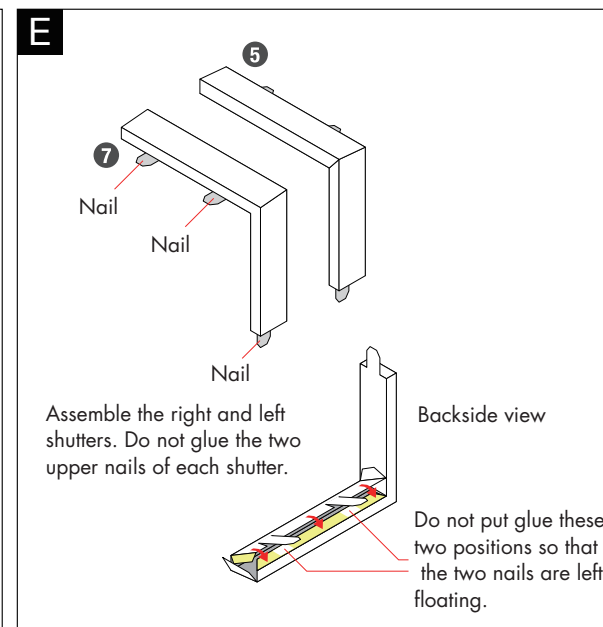
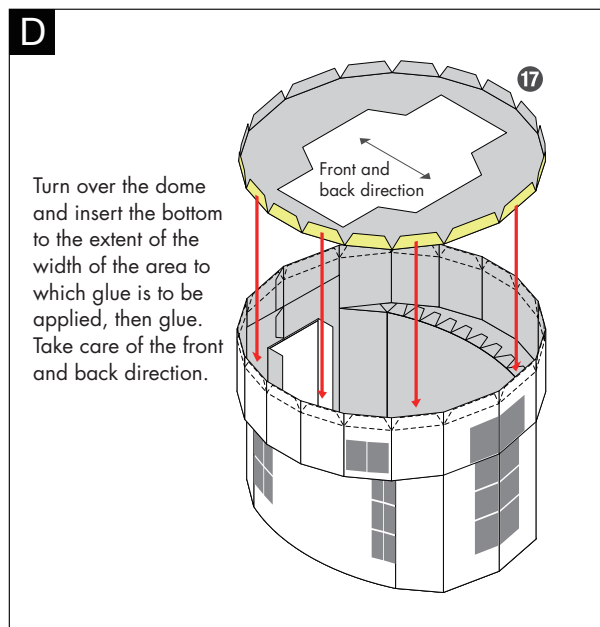
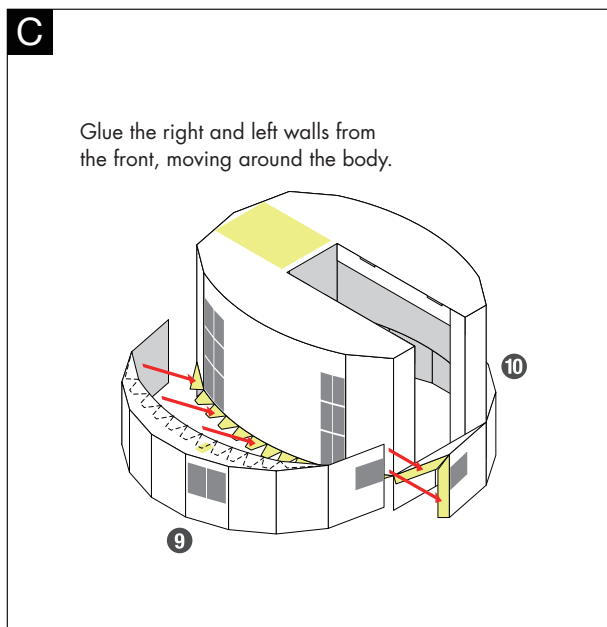
A

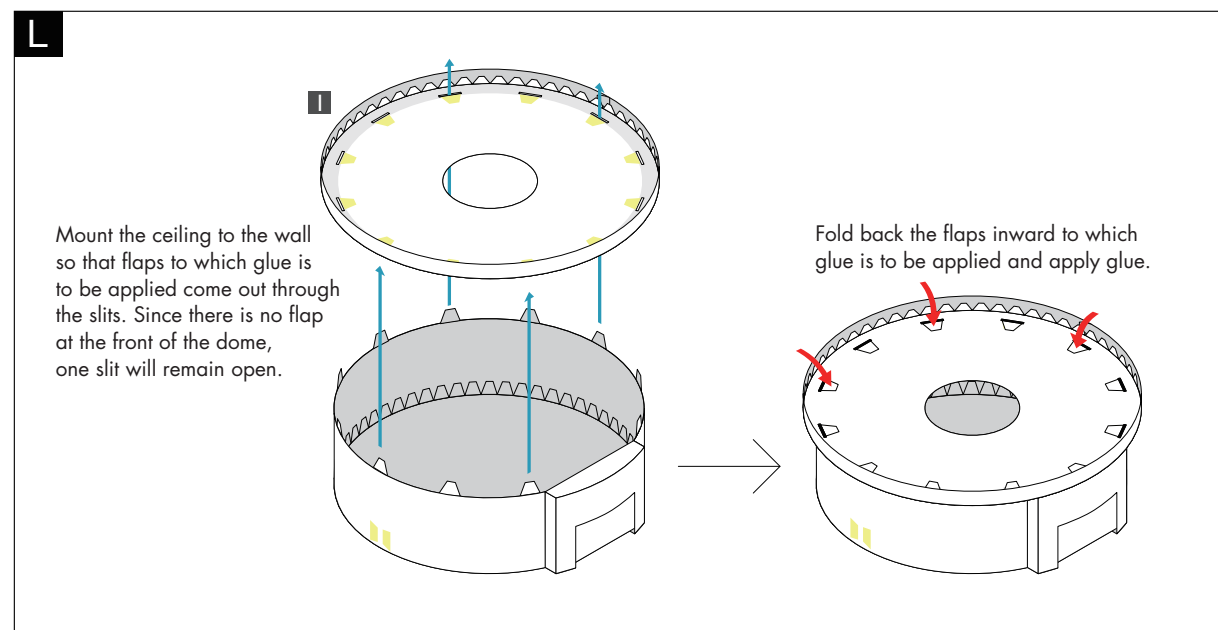
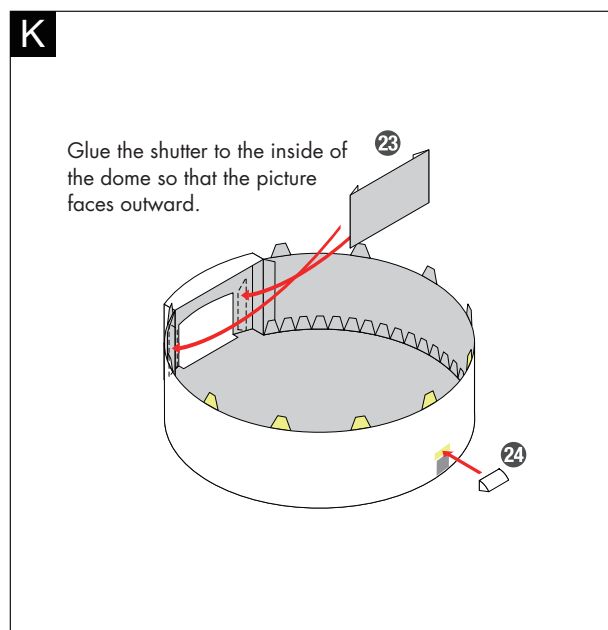
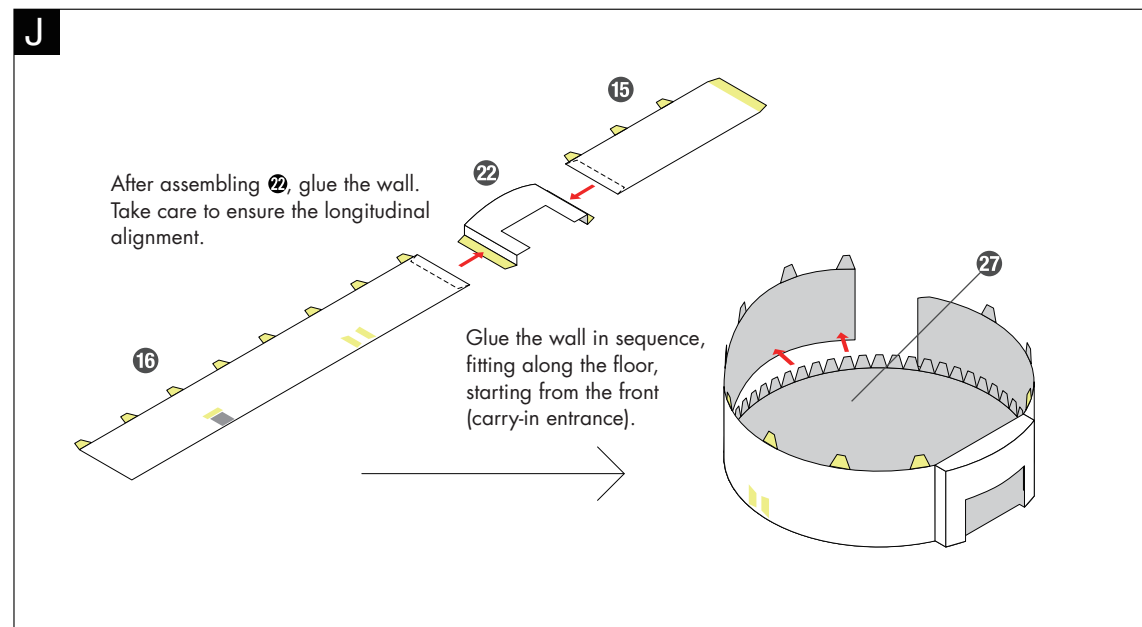
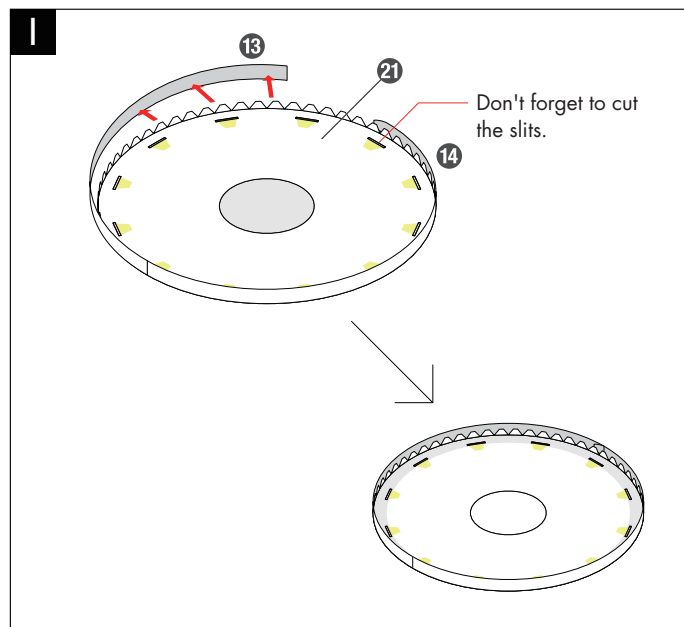


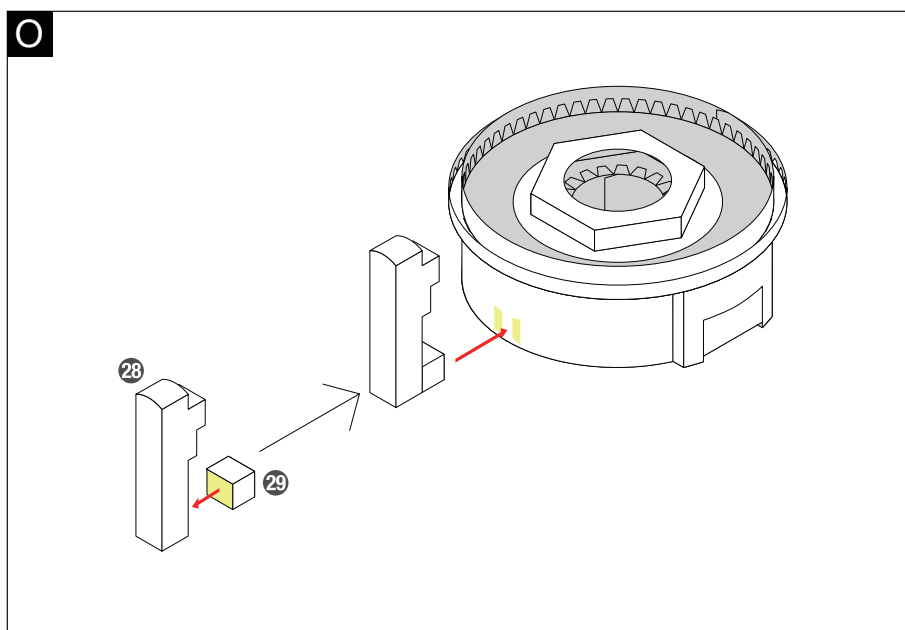
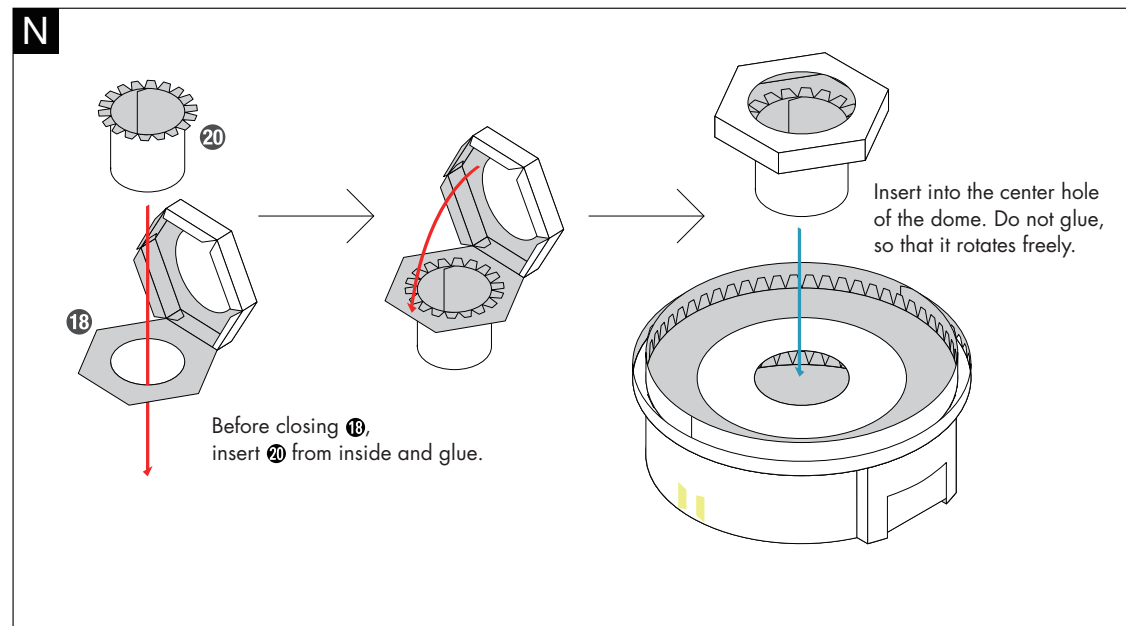
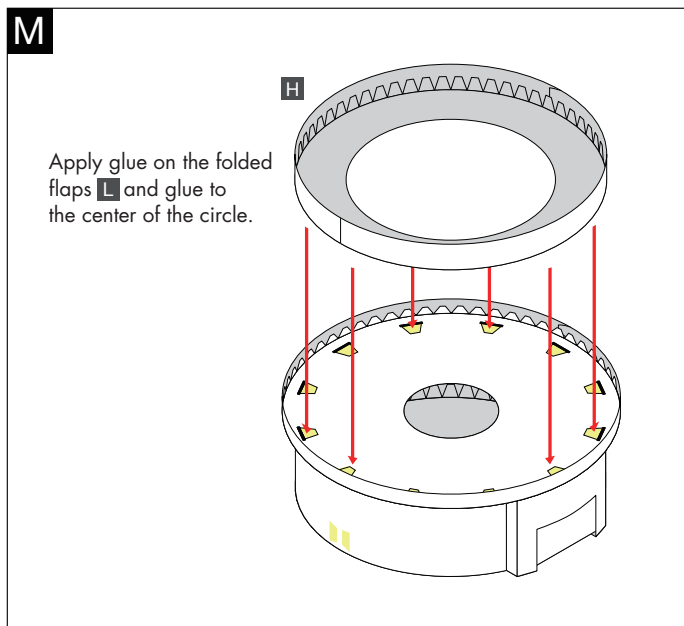
B

Glue to the backside of the paper along the periphery of the ellipse.  
To ensure the optimal finish, glue one flap each time, and dry in series, working from front to back.

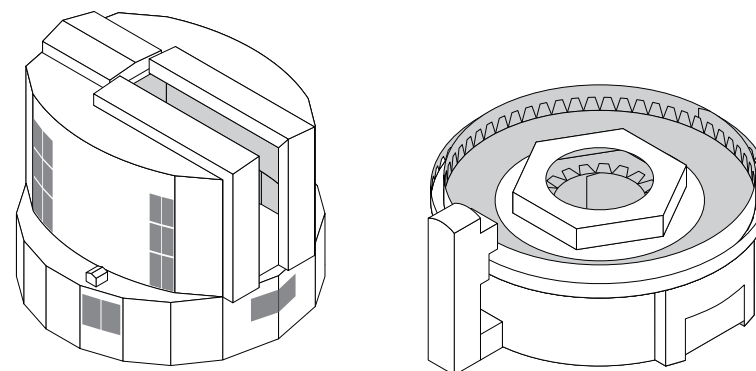


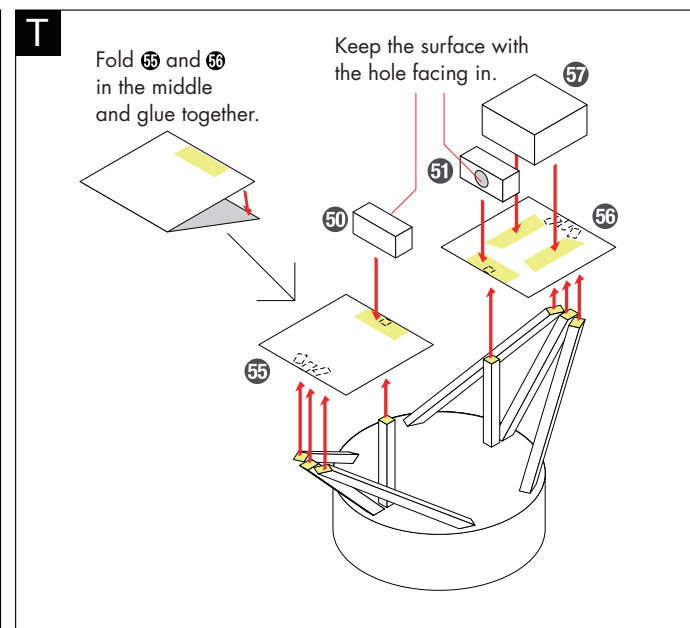
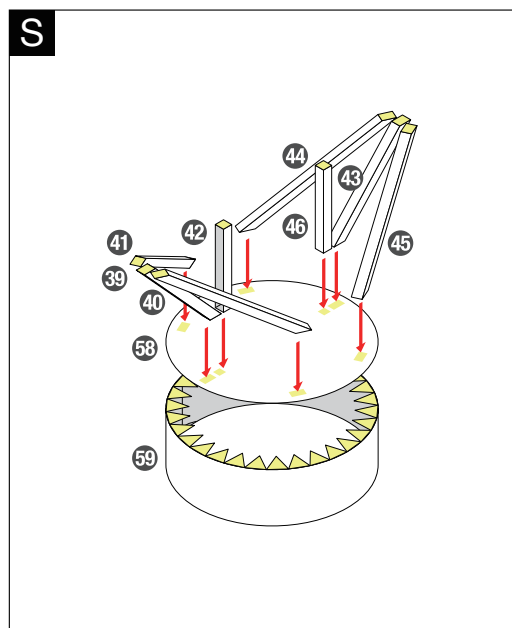
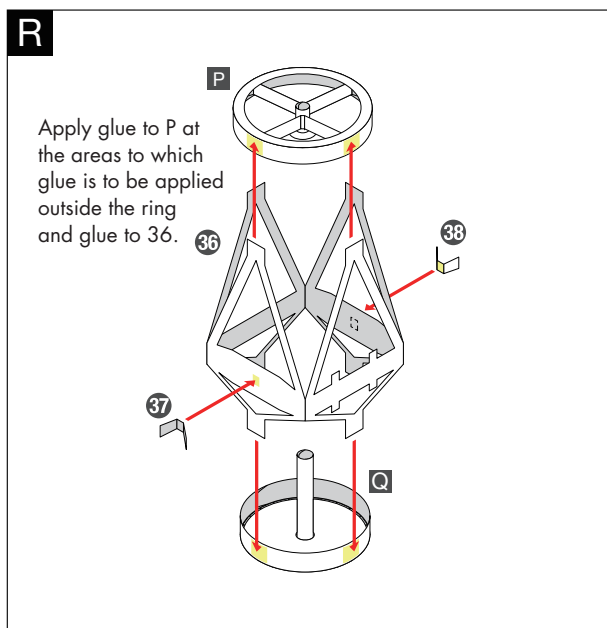
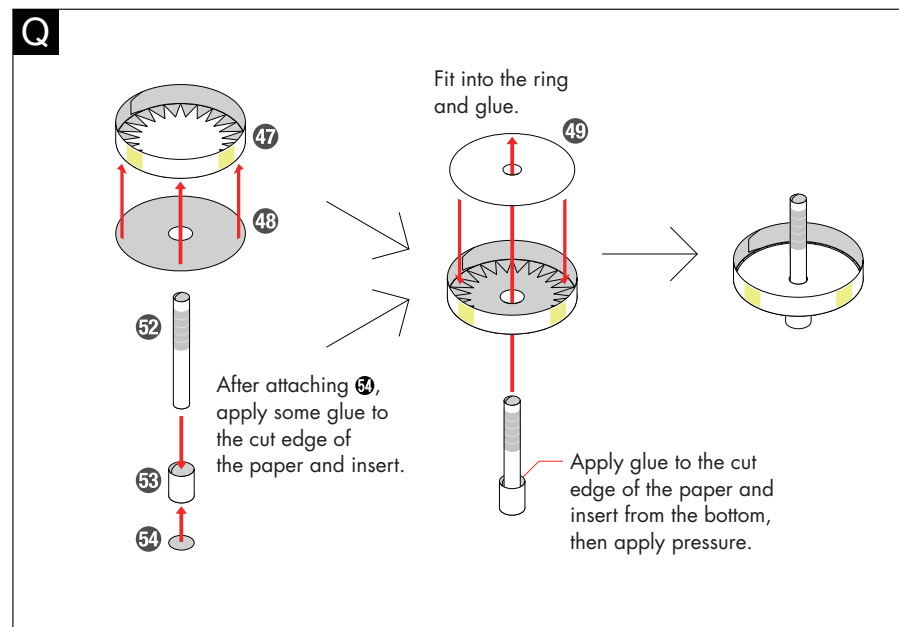
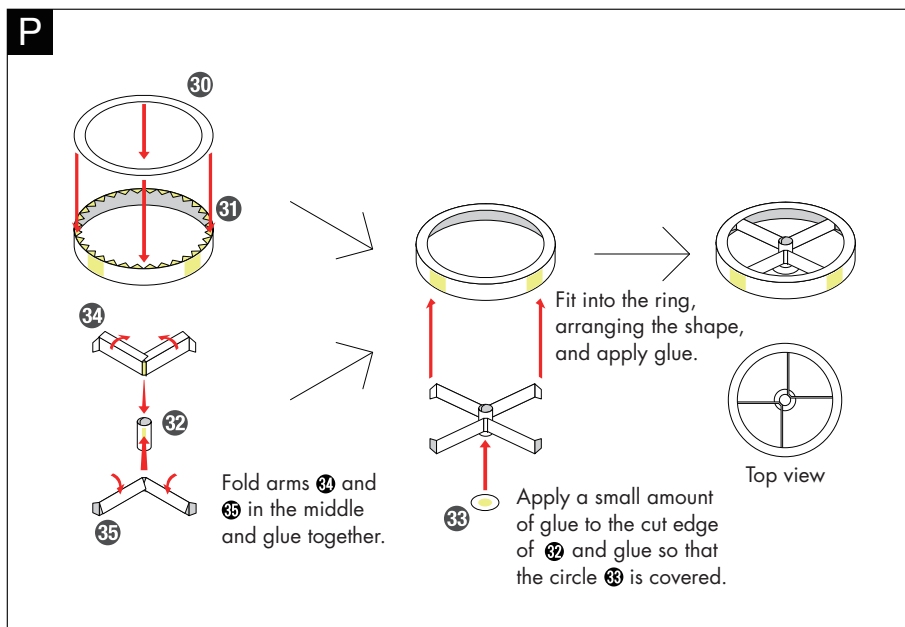






Both the upper part and lower part of the dome have been completed.  
The next step is to assemble the telescope.

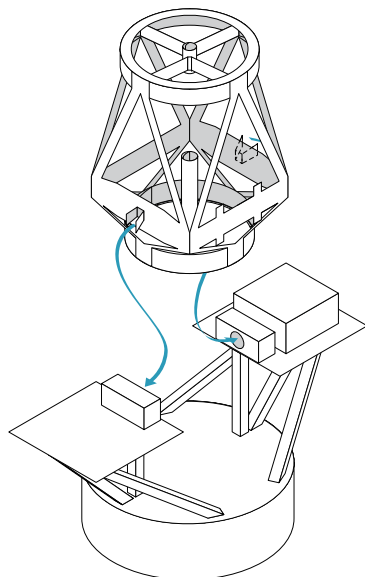




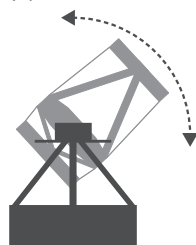


**U**

Fold up the right and left nails and insert into the holes. The nail will expand inside to fix. No gluing is required.

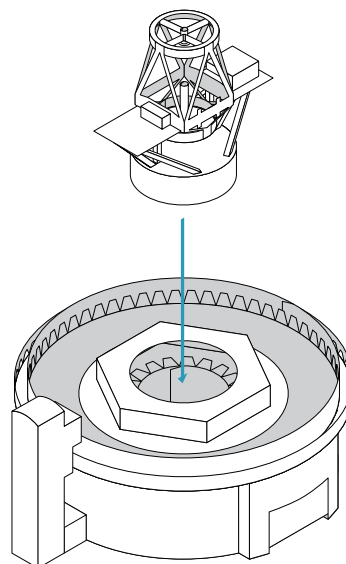


You can adjust the altitude (angle of the telescope) to any position desired.

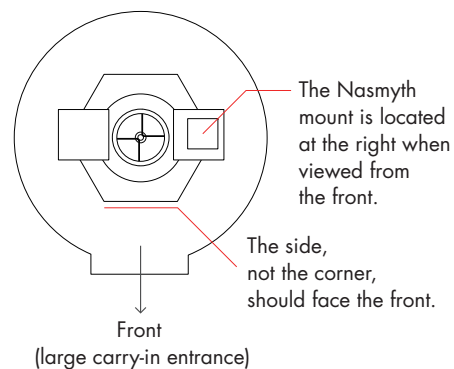


**V**

Fit the telescope into the center hole of the lower part of the dome. Do not glue.

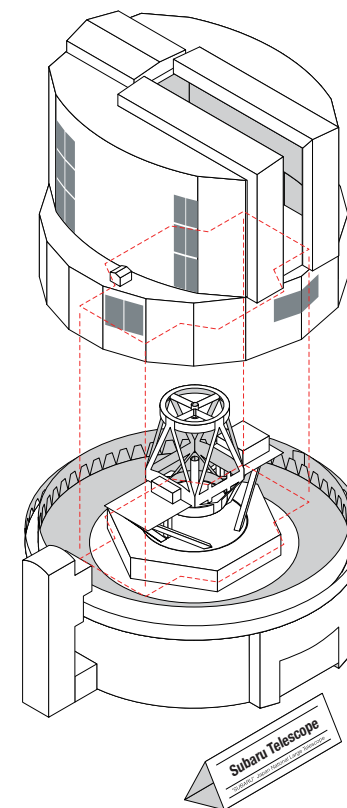


Both the telescope and the setting rack can rotate freely. For the moment, however, keep them positioned as shown below.



**W**

To complete the assembly, fit the upper dome so that the hexagons at the center engage each other, keeping the Nasmyth mount from colliding. Set up the completed model together with the plate.



Finished!

Moving parts of the completed model.

- The shutter of the opening opens and closes.
- The upper dome revolves 360 degrees.  
The telescope revolves together with the dome.
- The upper dome can be removed.  
The altitude of the telescope can be adjusted.
- The telescope revolves 360 degrees.

\*In the actual Subaru Telescope, the rotation of the dome and the rotation of the telescope are implemented by separate mechanisms to minimize errors in horizontal rotation.