

XRISM



The X-Ray Imaging and Spectroscopy Mission (XRISM, pronounced "crism"), formerly the X-ray Astronomy Recovery Mission (XARM), is an X-ray space telescope mission of the Japan Aerospace Exploration Agency (JAXA) in partnership with NASA to provide breakthroughs in the study of structure formation of the universe, outflows from galaxy nuclei, and dark matter. As the only international X-ray observatory project of its period, XRISM will function as a next generation space telescope in the X-ray astronomy field.

The mission is a stopgap for avoiding a potential observation period gap between X-ray telescopes of the present (Chandra, XMM-Newton) and those of the future (Advanced Telescope for High Energy Astrophysics (ATHENA)). Without XRISM, a blank period in X-ray astronomy may arise in the early 2020s due to the loss of Hitomi. During its formulation, XRISM/XARM was also known as the "ASTRO-H Successor" or "ASTRO-H2".

XRISM is expected to recover the science that was lost with Hitomi, such as the structure formation of the universe, feedback from galaxies/active galaxy nuclei, and the history of material circulation from stars to galaxy clusters. The space telescope will also serve as a technology demonstrator for the European Advanced Telescope for High Energy Astrophysics (ATHENA) telescope.

History

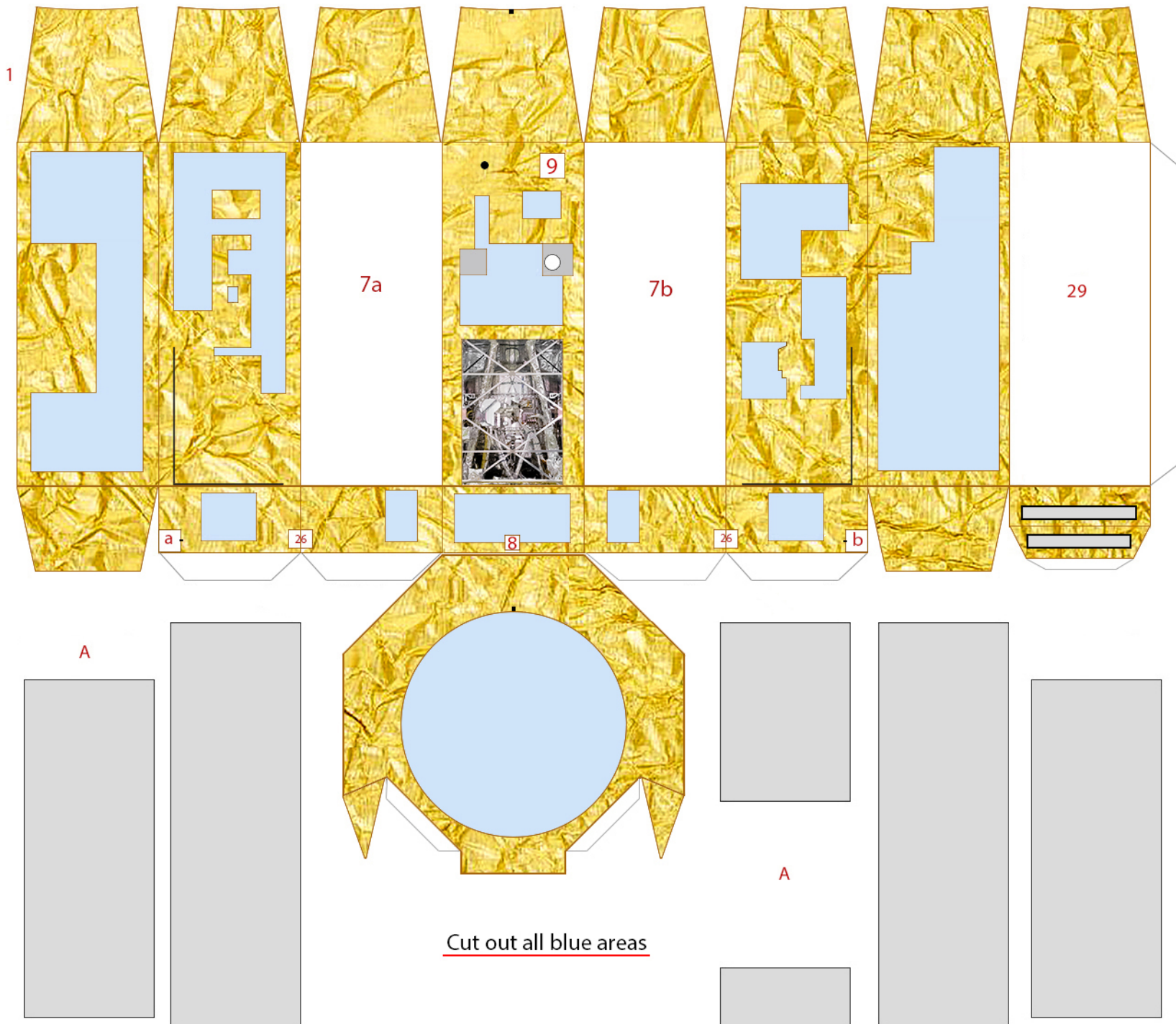
Following the premature termination of the Hitomi mission, on 14 June 2016 JAXA announced their proposal to rebuild the satellite. The XARM pre-project preparation team was formed in October 2016. In the U.S. side, formulation began in the summer of 2017. In June 2017, ESA announced that they will participate in XRISM as a mission of opportunity.

Instruments

XRISM will carry two instruments for studying the soft X-ray energy range, Resolve and Xtend. The satellite will have telescopes for each of the instruments, SXT-I (Soft X-ray Telescope for Imager) and SXT-S (Soft X-ray Telescope for Spectrometer). The pair of telescopes will have a focal length of 5.6 m (18 ft).

JAXA launched XRISM on 6 September 2023 at 23:42 UTC (7 September 08:42 Japan Standard Time) using an H-IIA rocket from Tanegashima Space Center. XRISM was successfully inserted into orbit on the same day, and the accompanying launch payload, SLIM, began its multi-month journey to the Moon.





Score, fold slightly
back at the line

Cut out all blue areas

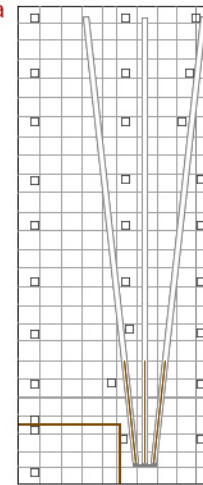
For a realistic look, paint each with silver paint, glue to back of the main body so that the color shows through the cutouts.

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4

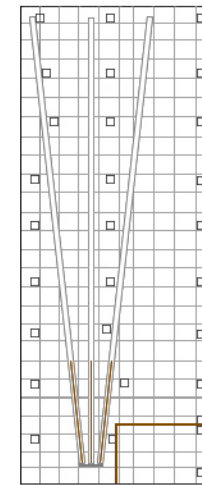


7a

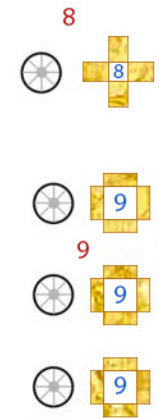


Glue to two layers of cardstock,
color edges Gold

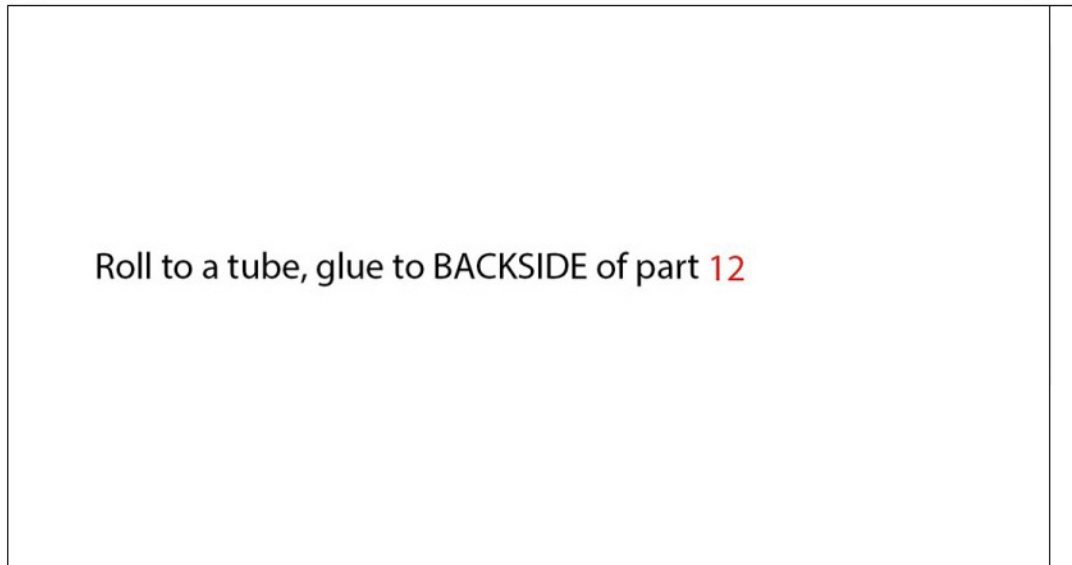
7b



Cut Four plastic broom
straws colored light grey or
silver, 3mm long.



5



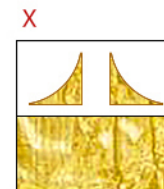
Roll to a tube, glue to BACKSIDE of part 12



6 Color backside light grey or silver, roll to a ring

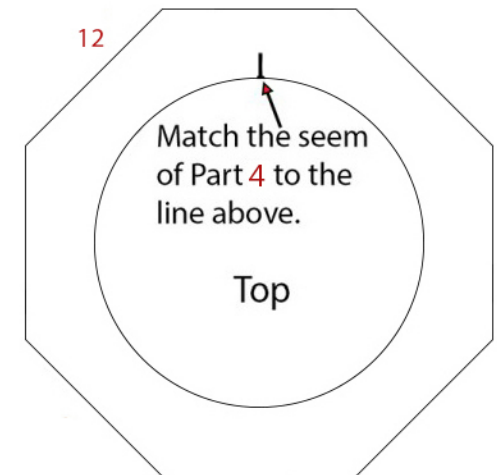


11
Fold, glue
back-to-back



Fold, glue back-to-back

12



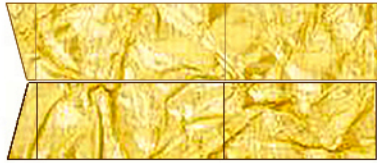
XRISM

Zach's

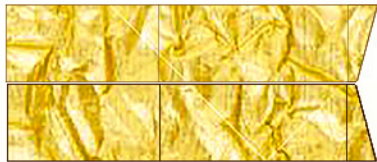


PaperSat Designs
Spacecraft paper Models

13a



Fold, glue each back-to-back. Side with the BLACK outlines is the INSIDE area.



13b

14



15



16

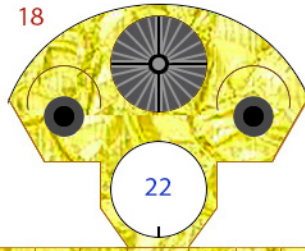


Color back Black

17



18



22

21

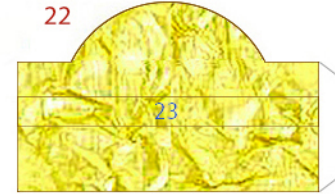


18a



Color back Black

22



23

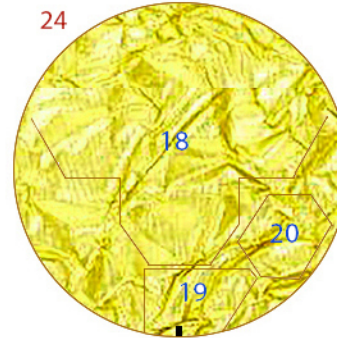
23



25

Glue to cardstock, glue inside part 9 at the top to ensure roundness.

24

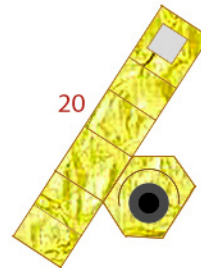


18

20

19

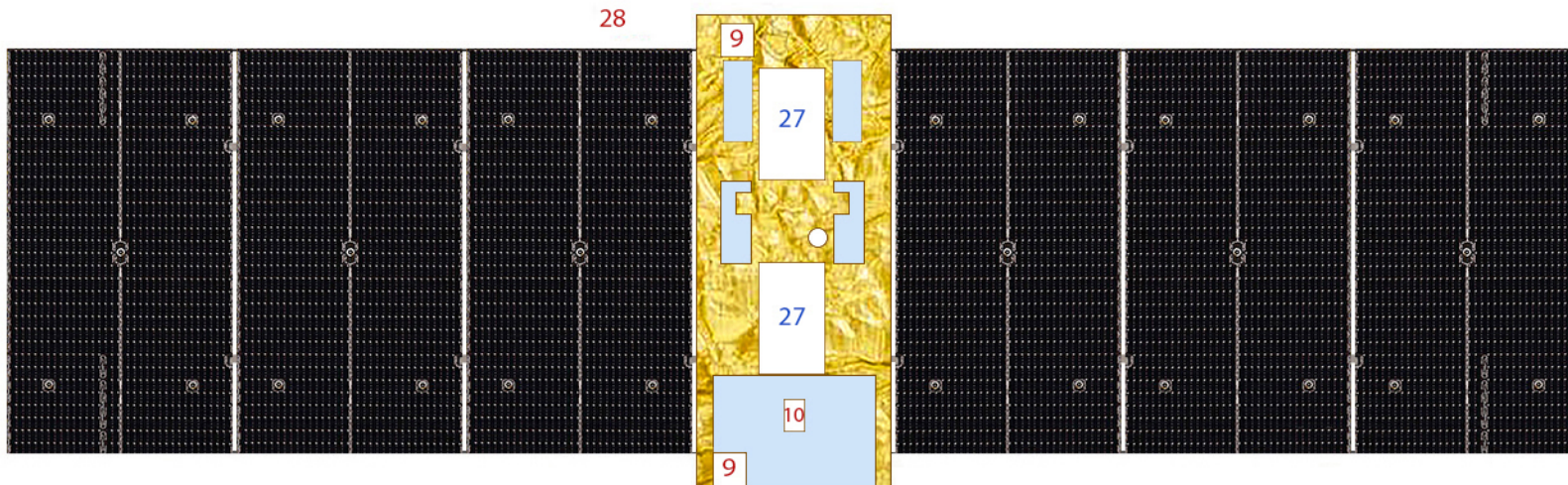
20



19



28



9

27

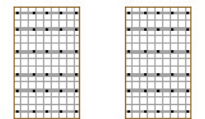
27

10

9

Cut out the light blue areas.

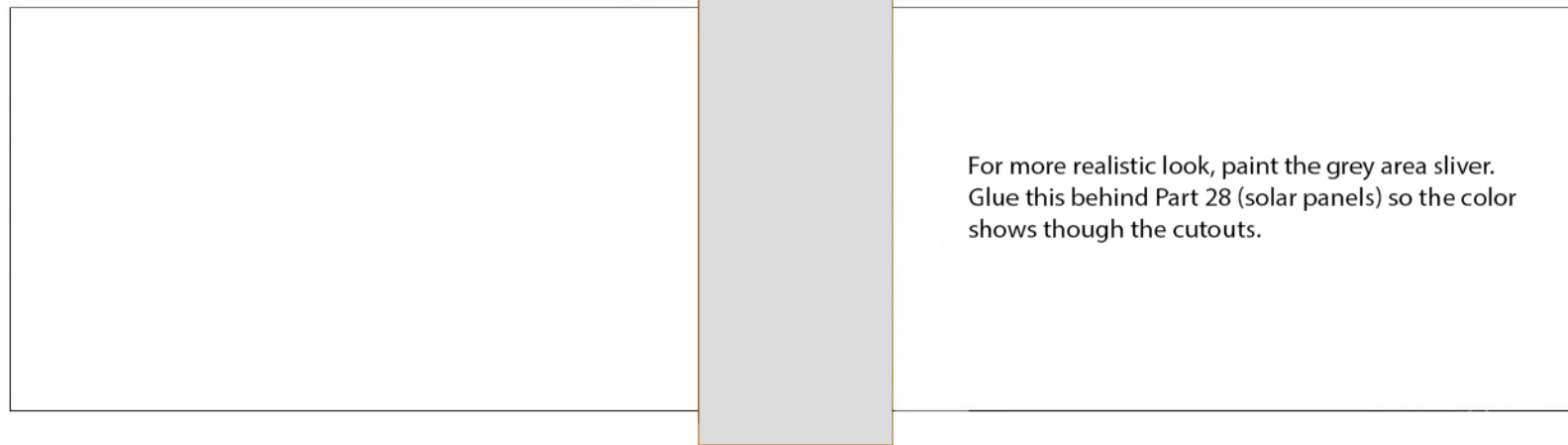
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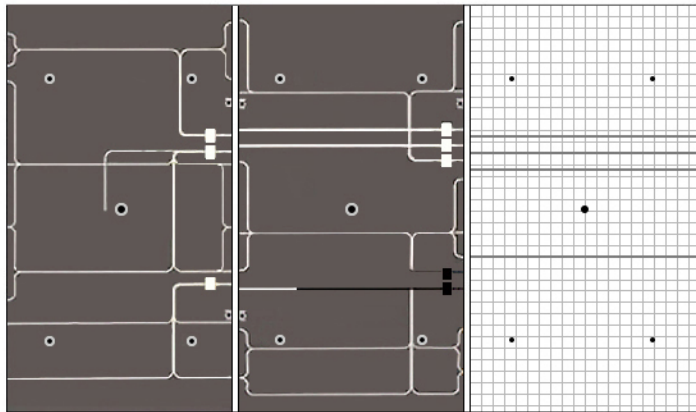
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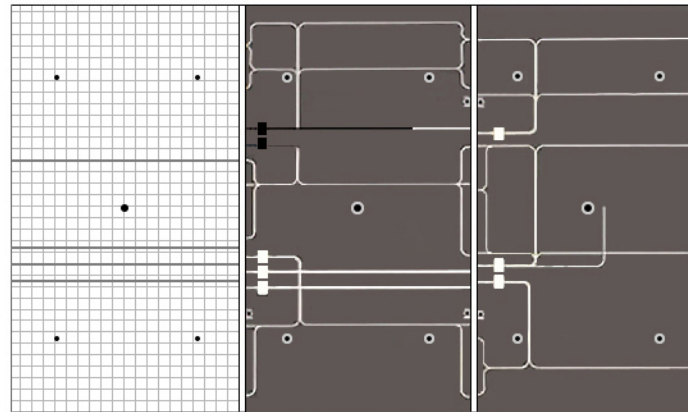
29



30



31



32



Roll, glue to cylinder with graphics inside

Fold, glue back-to-back

33



34



35



36



Glue to cardstock

