



## About X-ray Astronomy Satellite "Hitomi" (ASTRO-H)

The new generation X-ray astronomy satellite, Launched Feb 17, 2016. It was developed from an international collaboration including Japan and NASA. The cutting edge instrument on board is the "X-ray micro-calorimeter," which observes X-rays from space with the world's greatest spectral capability. The other 3 detectors on board allow high sensitivity observations in a wide bandwidth spanning soft X-ray to the softest Gamma-ray.

"Hitomi" (ASTRO-H) will apply these new functions to investigate the mechanisms of how galaxy clusters—the largest objects in space made of "visible matter"—formed and influenced by dark energy and dark matter, to reveal the formation and evolution of supermassive black holes at the center of galaxies, and to unearth the physical laws governing extreme conditions in neutron stars and black holes.



The satellite features cutting-edge instruments; SXS, operated at only 50 mK, is capable of measuring, with unprecedented accuracy, the energy of incoming X-rays. It measures temperature changes in a sensor resulting from absorption of X-ray photons. HXI, operating in the focusing of a Hard X-ray Telescope, will produce the first ever images of the high-energy X-ray universe.

The Hitomi mission objectives are to:

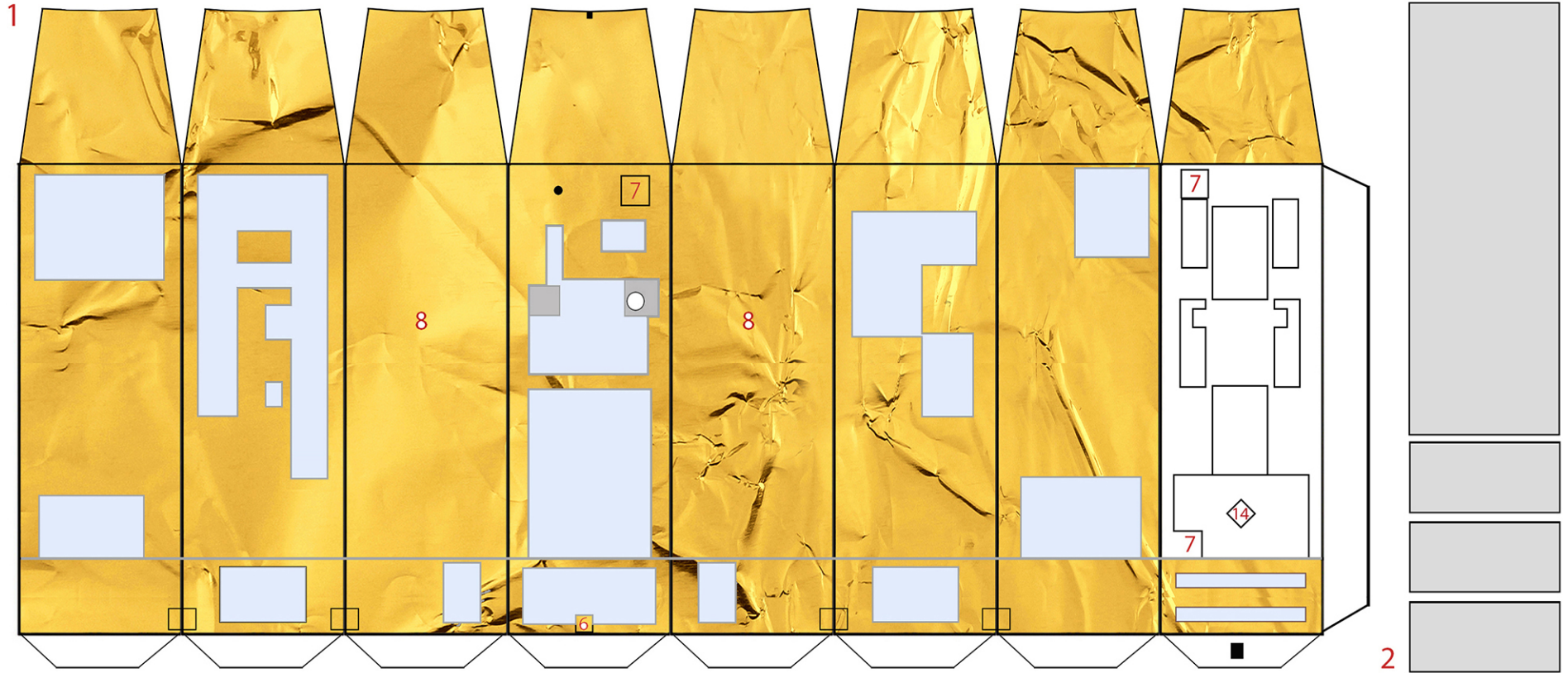
- Study of the structure of the universe
- How do black hole develop, and how do they impact the surroundings ?
- How are galaxy clusters created and how do they evolve ?
- When were heavy elements in the universe created , and how much ?

Study of the physics in extreme conditions:

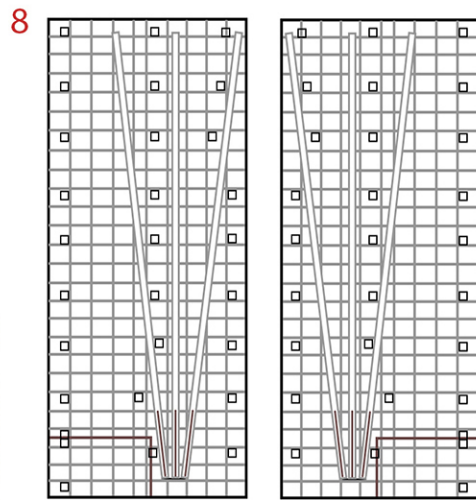
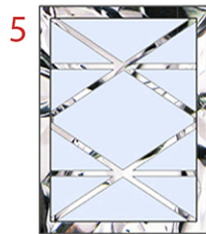
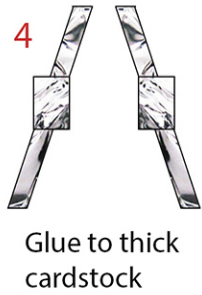
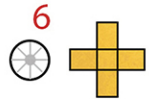
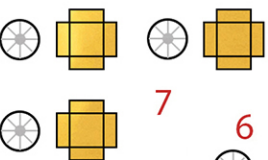
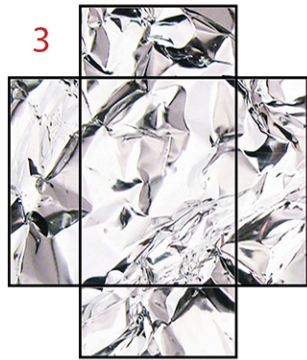
- What physical phenomena are occurring in extreme conditions with high density and strong magnetic fields?
- Is space time really distorted near black holes?
- Where and how are cosmic rays created?

# Astro-H

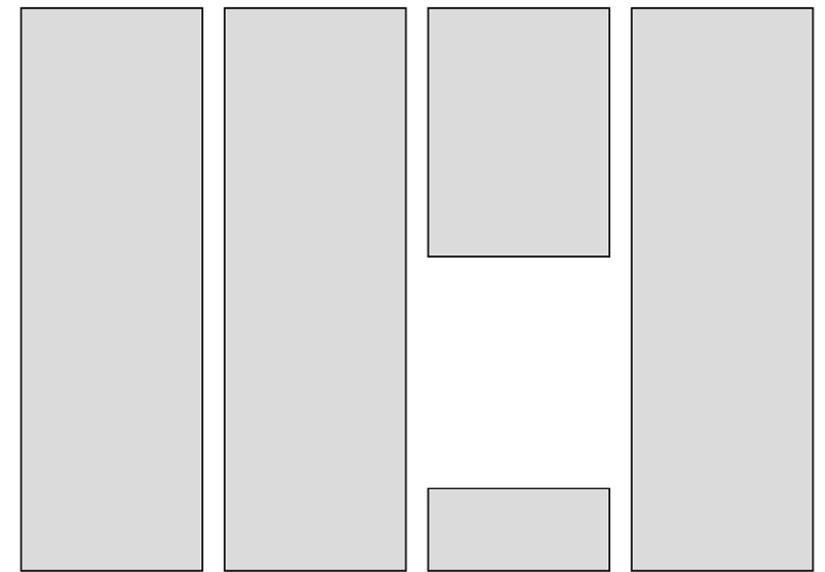
By GA 2016



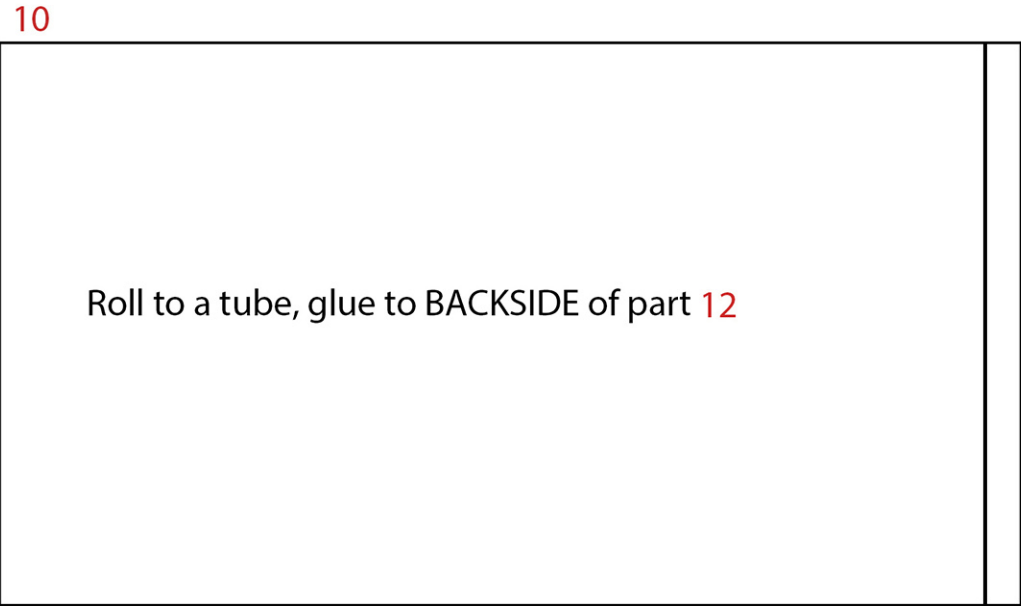
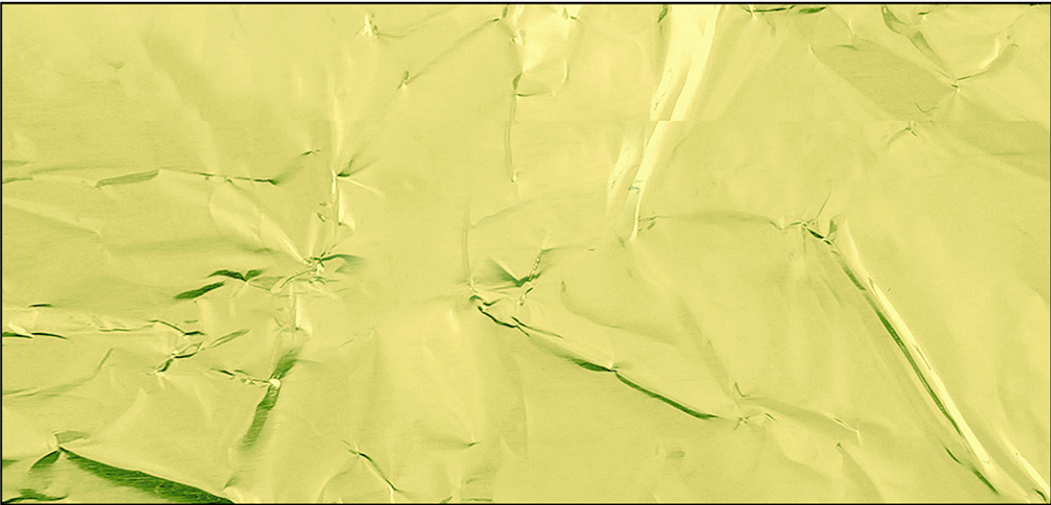
Cutout all light blue areas.



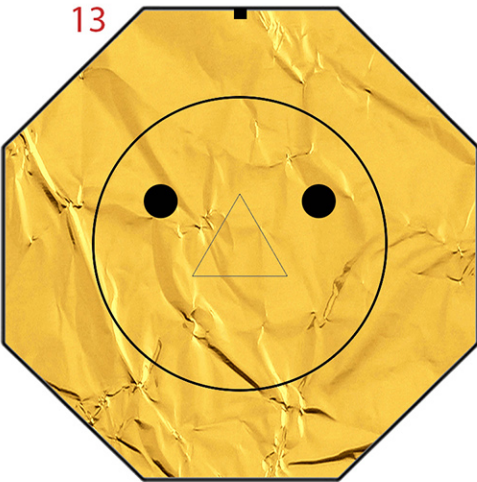
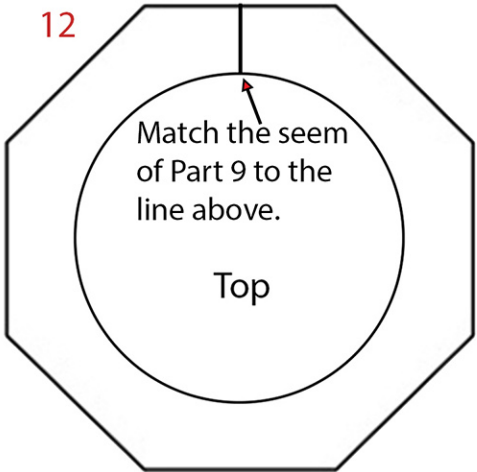
Glue to thick cardstock  
Color edges gold



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



Color back Black Roll to a ring, glue to bottom of Part 13.



Glue to cardstock for strength.



15

Outside

Inside color

Inside color

Outside

15a

17

Match the seem of Part 16 to this marker.

16

20

21

22

23

18

19

Color back Black

Color back Black

25

7

4

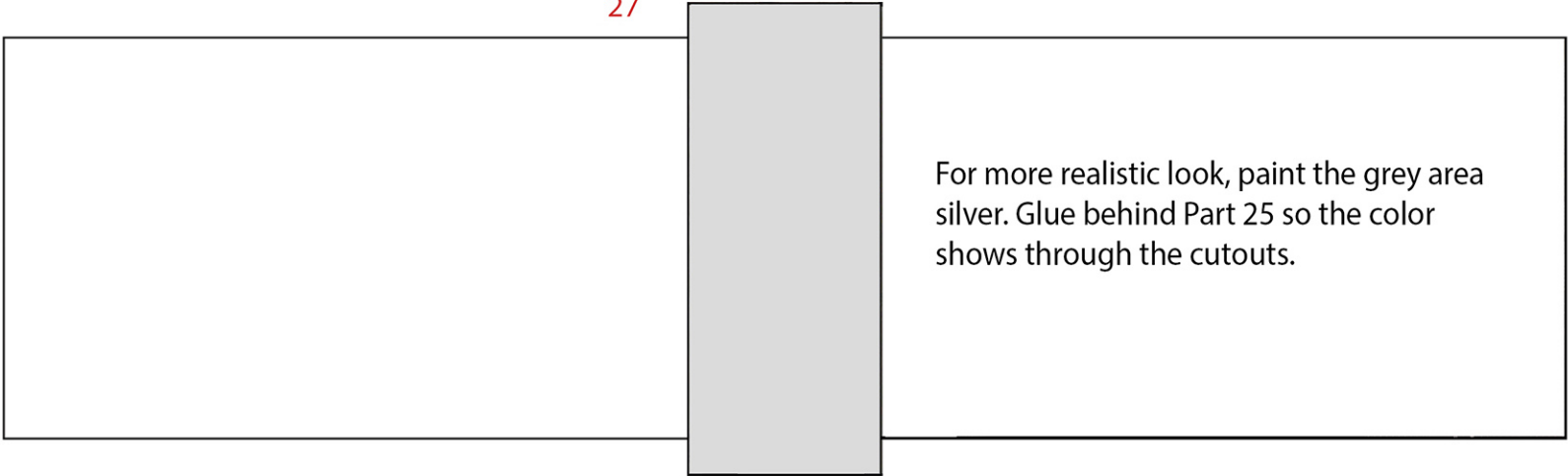
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Cut out the light blue areas.

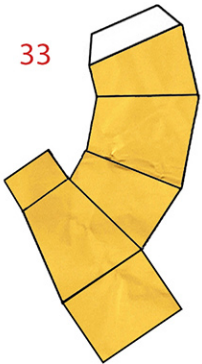
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26

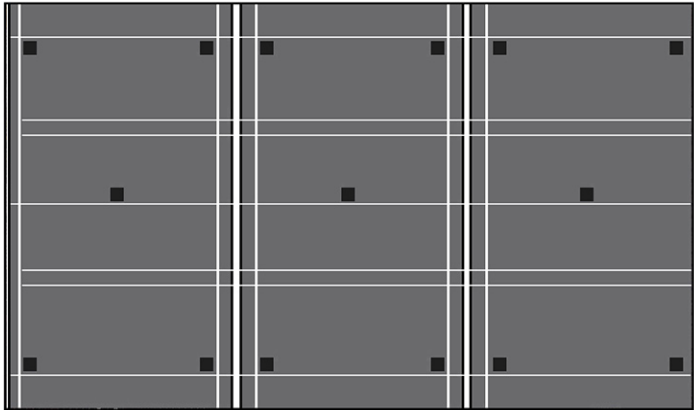
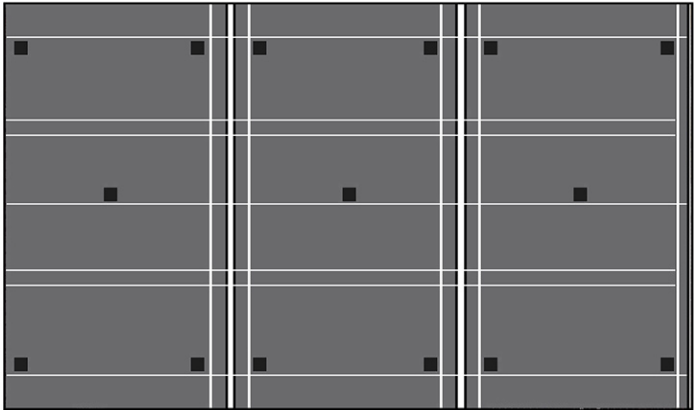
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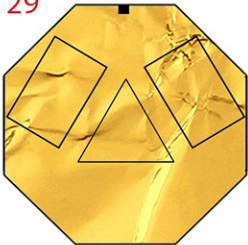
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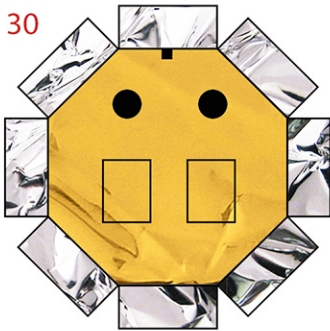
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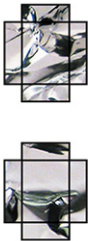
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30



32



31



Internal support, Roll to a ring

34

