

Exosat (European X-ray Observing Satellite)



The European X-ray Observatory Satellite (EXOSAT), originally named HELOS, was an X-ray telescope operational from May 1983 until April 1986 and in that time made 1780 observations in the X-ray band of most classes of astronomical object including active galactic nuclei, stellar coronae, cataclysmic variables, white dwarfs, X-ray binaries, clusters of galaxies, and supernova remnants.

ExoSat was launched into orbit on May 26, 1983.

The EXOSAT project was also the forerunner of current X-ray telescopes such as ESA's XMM-Newton and NASA's Chandra satellite. These satellites work on very similar principles to EXOSAT, and due to new technology, are able to take more accurate readings.

Exosat was the first ESA spacecraft to carry on board a digital computer (OBC), with its main purpose being scientific data processing. Spacecraft monitoring and control were secondary. To provide the data handling subsystem with an exceptional flexibility of operation, the OBC and Central Terminal Unit were in-flight reprogrammable. This flexibility far exceeded any other ESA spacecraft built up to then.

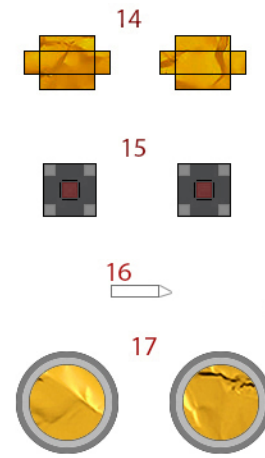
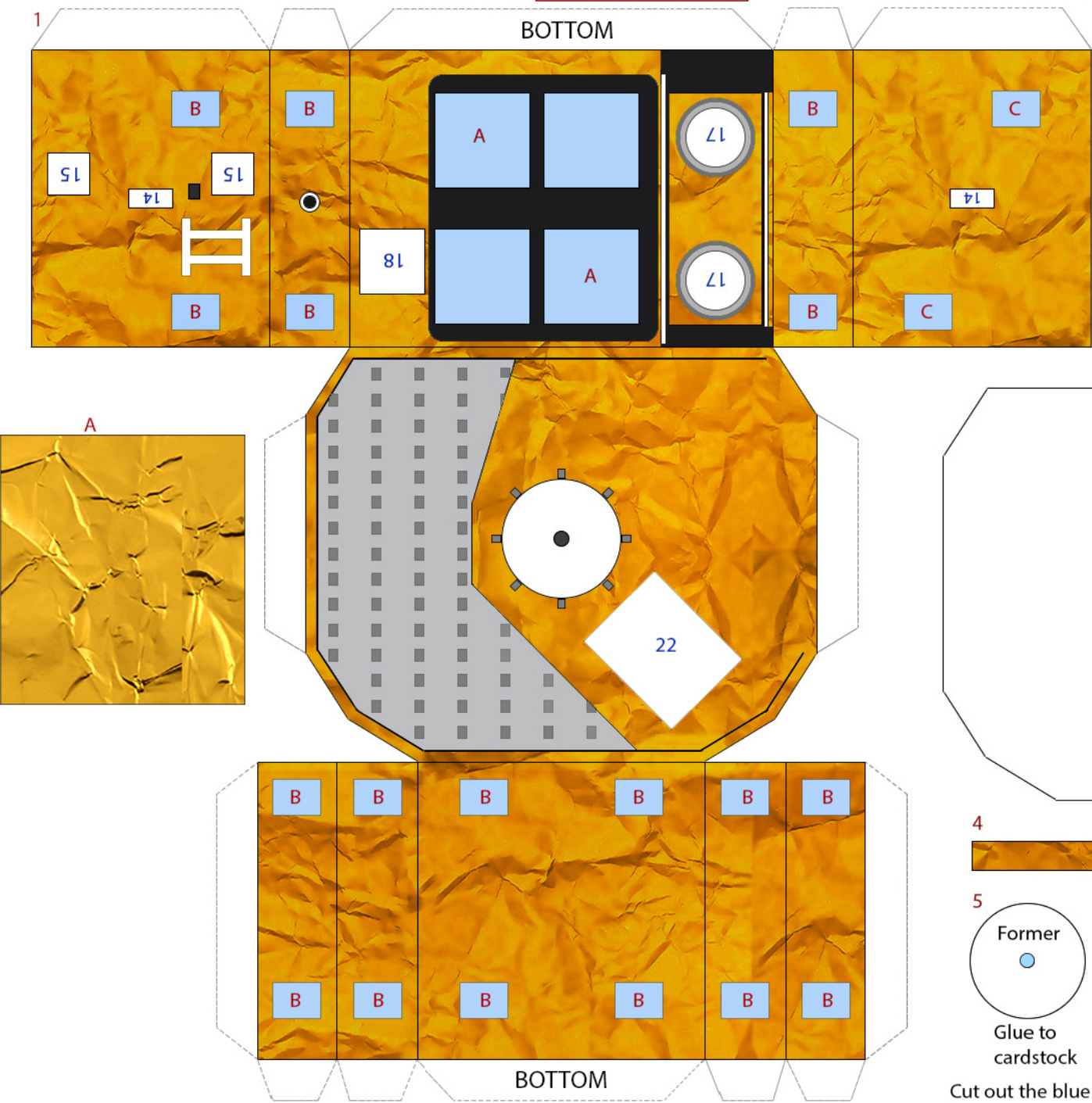
The mission made a number of significant scientific advances, including:

- ☒ Discovery of the quasi period oscillations in LMXRB and X-ray pulsars
- ☒ Comprehensive study of AGN variability
- ☒ Observing LMXRB and CV over many orbital periods
- ☒ Measuring iron lines in galactic and extra galactic sources
- ☒ Obtaining low-energy high-resolution spectra

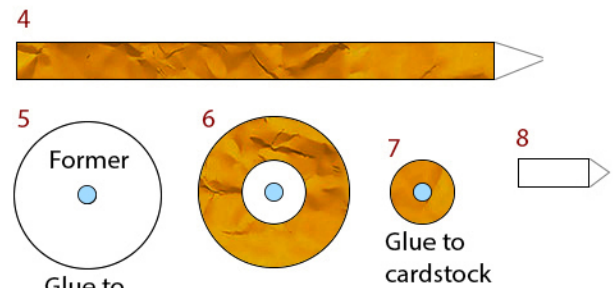
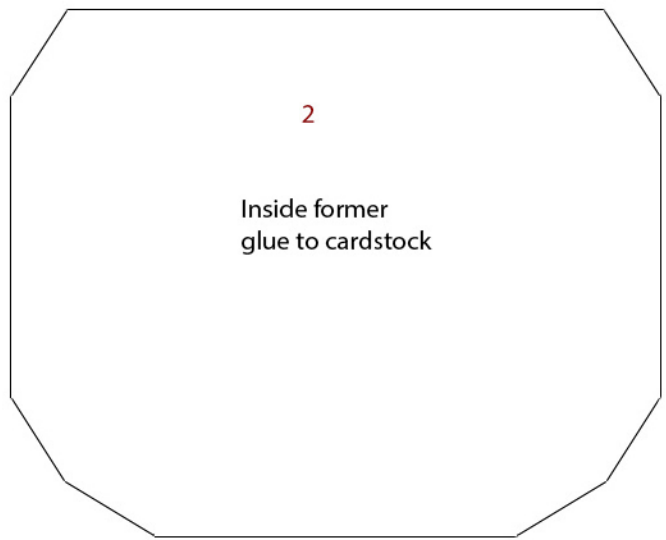
After a failure in the attitude control system, contact with the spacecraft was lost, and it re-entered the Earth's atmosphere on 6 May 1986.

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Cut out all blue areas

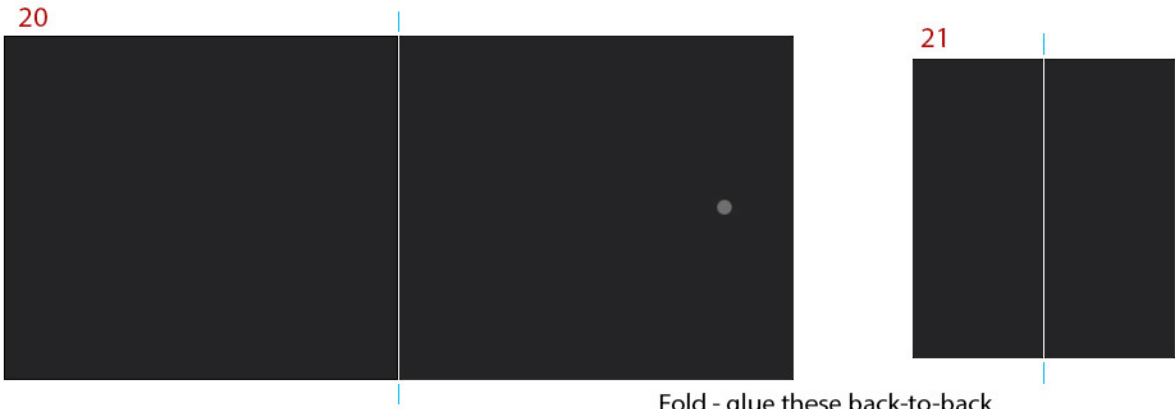
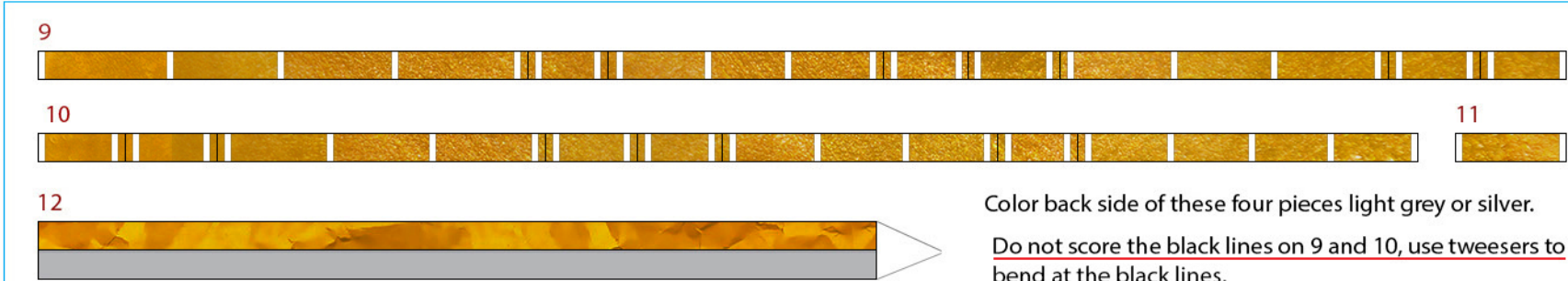
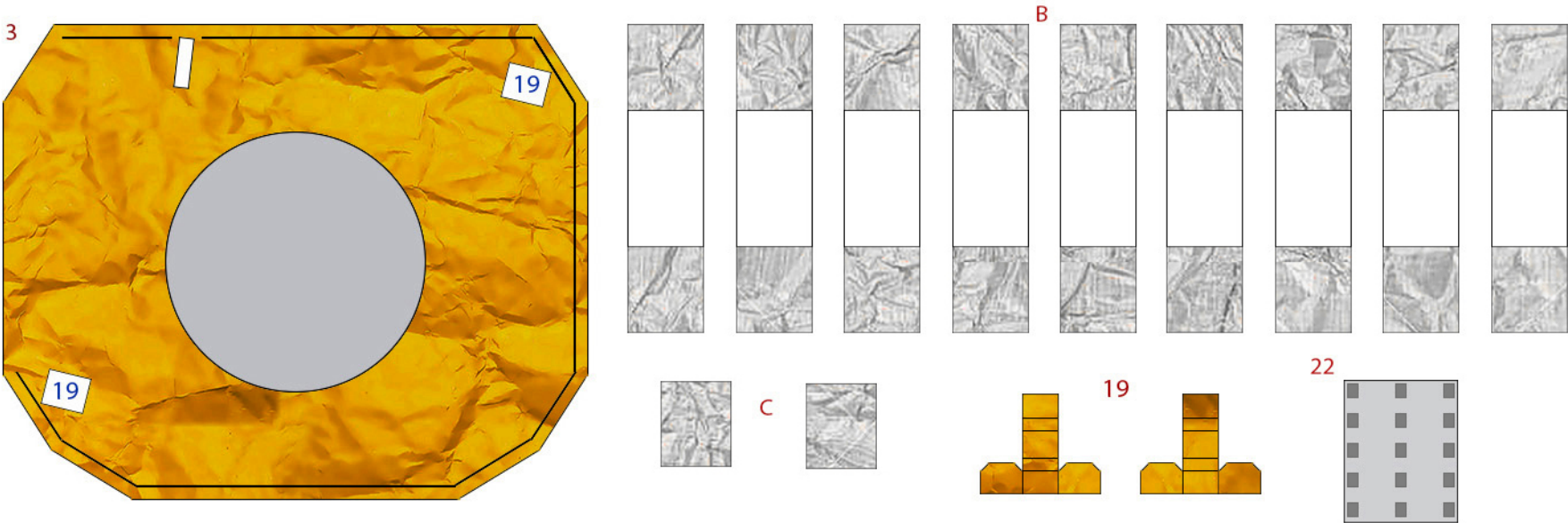
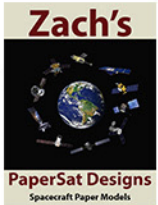


Glue to cardstock



Cut out the blue circles for a tooth pic to fit though

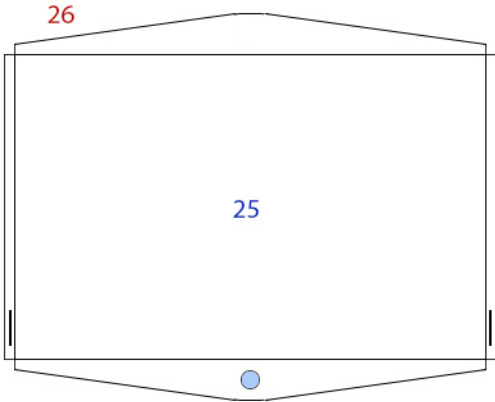
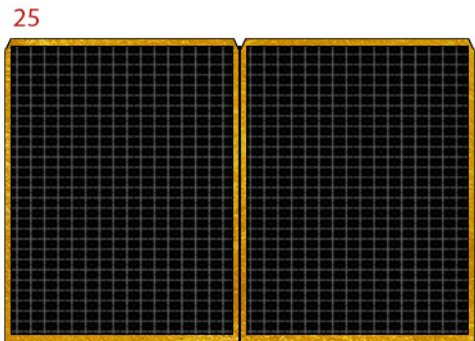
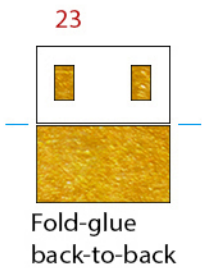
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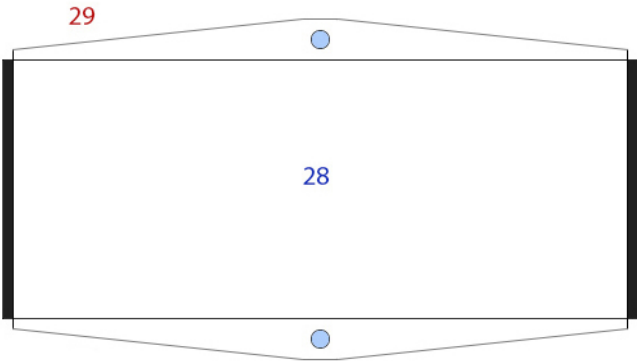
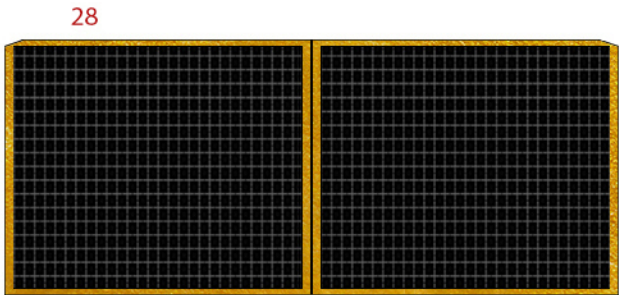
Cut pointed end of a tooth pic around 7mm long, colored white. Glue to the black dot on part 13.



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Cut out the blue circles



Cut a tooth pic the same length as the line below