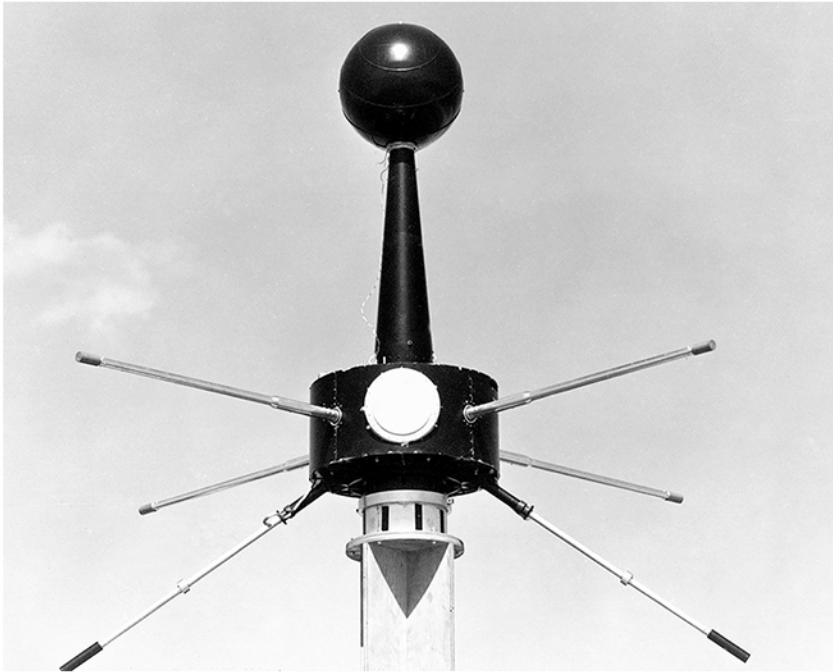


Explorer 10



Explorer 10 (also known as Explorer X or P14) was an American Earth-orbital satellite that investigated Earth's magnetic fields and nearby plasma. Launched on March 25, 1961 aboard a Thor-Delta, it was an early mission in the Explorer program and was the first satellite to measure the "shock wave" generated by a solar flare.

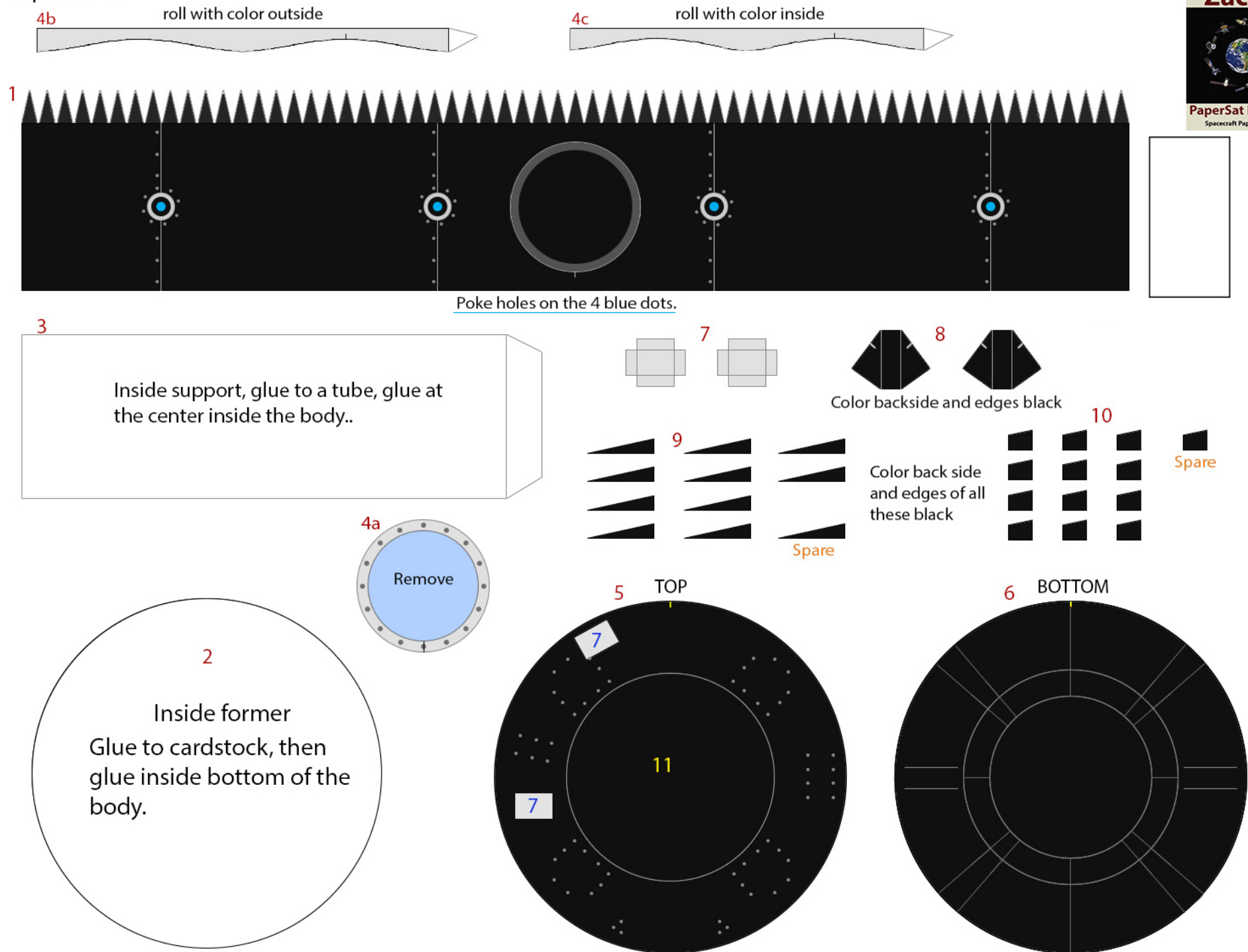
The objective was to investigate the magnetic fields and plasma as the spacecraft passed through Earth's magnetosphere and into cislunar space. The satellite was launched into a highly-elliptical orbit and was spin-stabilized with a spin period of 0.548 s. The direction of its spin vector was 71 degrees right ascension and minus 15 degrees declination. Because of the limited life of the spacecraft batteries, the only useful data were transmitted in real time for 52 hours on the ascending portion of the first orbit.

Explorer 10 was designed to map the interplanetary magnetic field using three different magnetometers, as well as a plasma probe. The most sensitive of those was mounted in a very prominent sphere mounted atop a fiberglass support boom. The magnetometers were produced by Goddard Space Flight Center, and the Massachusetts Institute of Technology provided the plasma probe.

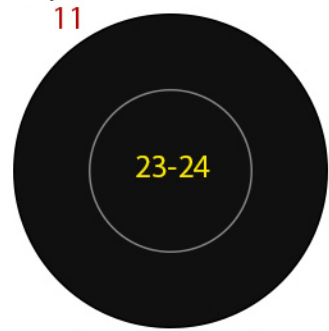
It was the first spacecraft to explore the boundary of Earth's magnetosphere (made the first measurements of magnetic fields and solar plasmas outside the Earth's magnetosphere). The data gathered gave support to the theory that the magnetic field surrounding the Earth is closely tied to that of the Sun.



Explorer 10

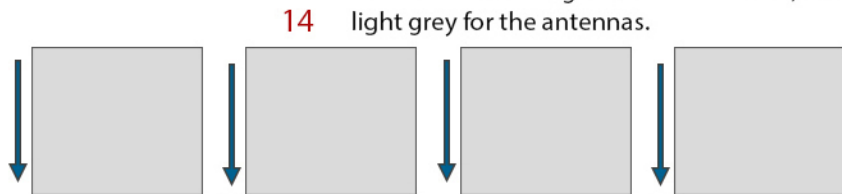


Explorer 10

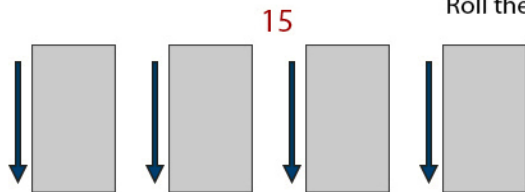


Glue to cardstock
Color edges black

Wrap these around one end of 4 skinny wooden skewers or similar material around 2mm diameter cut at the same length as the line below, colored light grey for the antennas.



Roll the same direction as the arrows



Wrap these around the other end of the antennas



Color back Black



Color back Black

Wrap parts 16 around one end of 2 skinny wooden skewers or similar material around 2mm diameter, cut at the same length as the line below, colored light grey for the Fluxgate sensors.

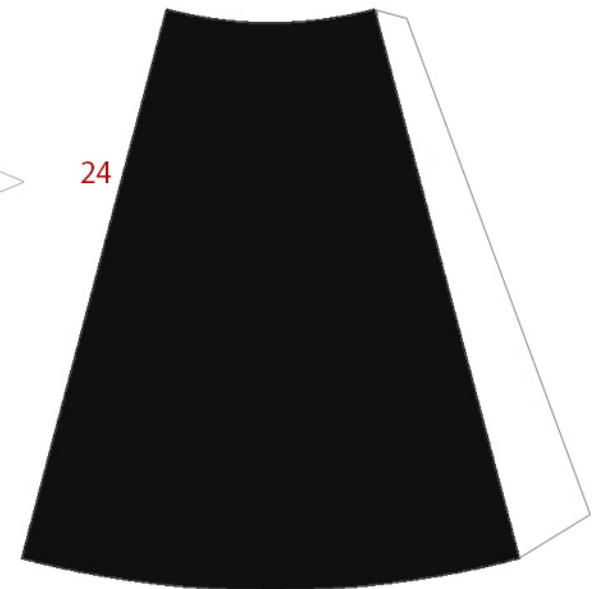


Roll the same direction as the arrows

Wrap these around the other end of the antennas



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Explorer 10

