



The Van Allen Probes (formerly known as the Radiation Belt Storm Probes (RBSP)) will study two extreme and dynamic regions of space known as the Van Allen Radiation Belts that surround Earth.

Named for their discoverer, James Van Allen, these two concentric, donut-shaped rings are filled with high-energy particles that gyrate, bounce, and drift through the region, sometimes shooting down to Earth's atmosphere, sometimes escaping out into space.

The radiation belts swell and shrink over time as part of a much larger space weather system driven by energy and material that erupt off the sun's surface and fill the entire solar system.

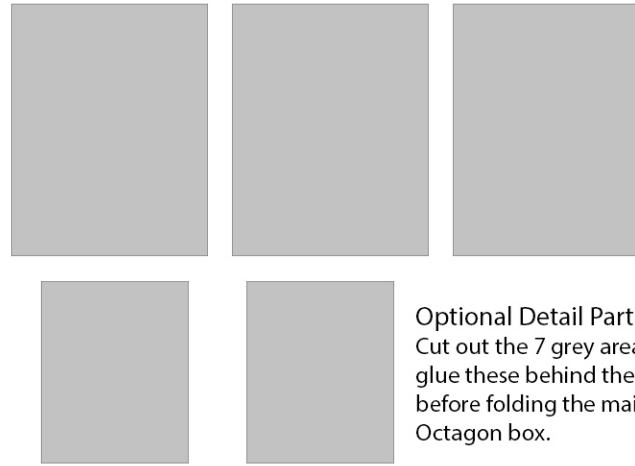
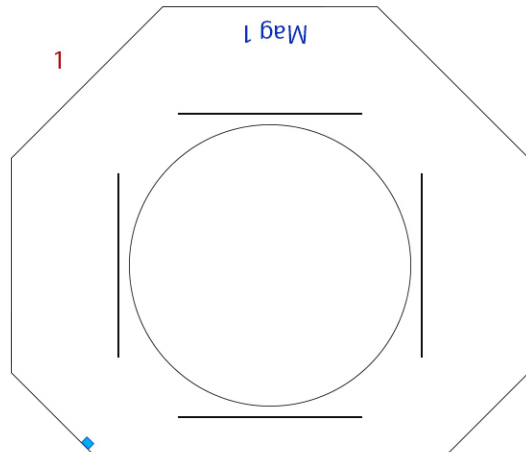
Space weather is the source of aurora that shimmer in the night sky, but it also can disrupt satellites, cause power grid failures and disrupt GPS communications. The Van Allen Probes will help scientists to understand this region and to better design spacecraft that can survive the rigors of space. As the second mission in NASA's Living With a Star program, the Van Allen Probes will take its place as part of a fleet of spacecraft that may someday help predict space weather before it even impacts Earth's environs.

Launched on August 30, 2012, the two Van Allen Probes spacecraft operate in the harsh conditions they are studying. While other satellites have the luxury of turning off or protecting themselves in the middle of intense space weather, the Van Allen Probes must continue to collect data, and therefore, been built to withstand the constant bombardment of particles and radiation they will experience in this intense area of space. The mission's general scientific objectives are to

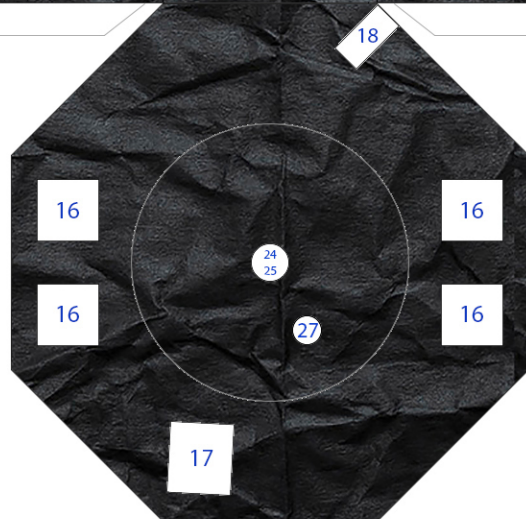
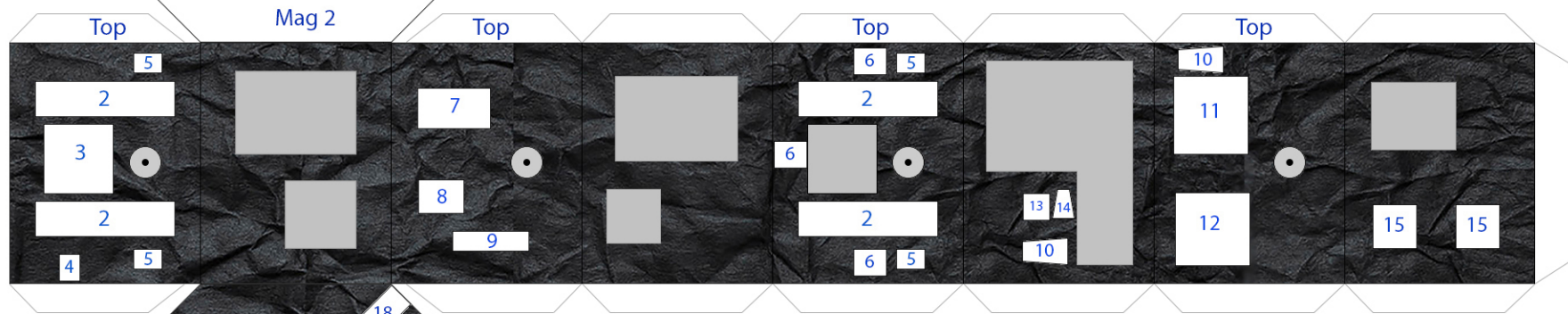
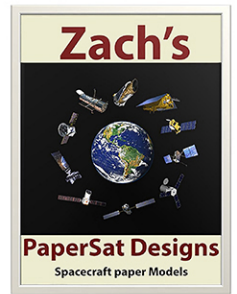
- ☒ Discover which processes -- singly or in combination -- accelerate and transport the particles in the radiation belt, and under what conditions.
- ☒ Understand and quantify the loss of electrons from the radiation belts.
- ☒ Determine the balance between the processes that cause electron acceleration and those that cause losses.
- ☒ Understand how the radiation belts change in the context of geomagnetic storms.

Two years after their launch, the Van Allen Probes have delivered a wealth of data that has resulted in numerous discoveries, findings, and papers, all of which have increased our understanding of these fascinating regions of space.

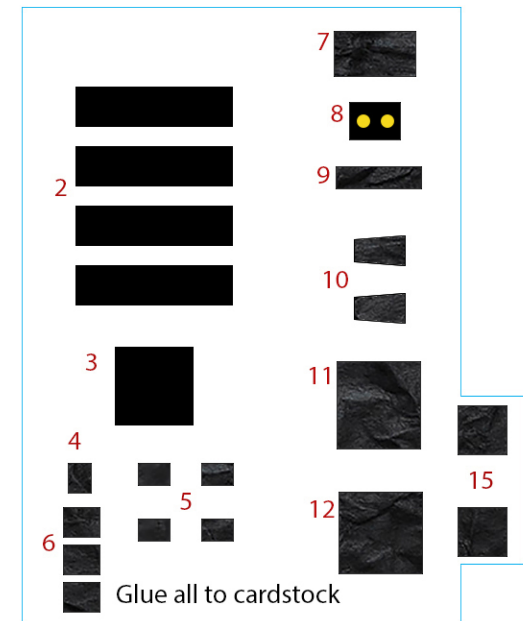
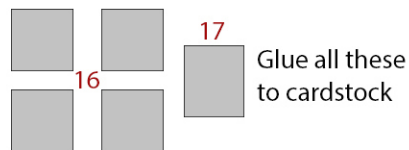
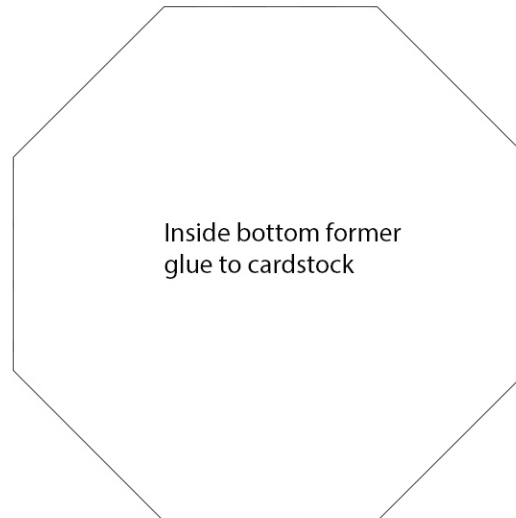
RBSP (Van Allen probes) Version 2



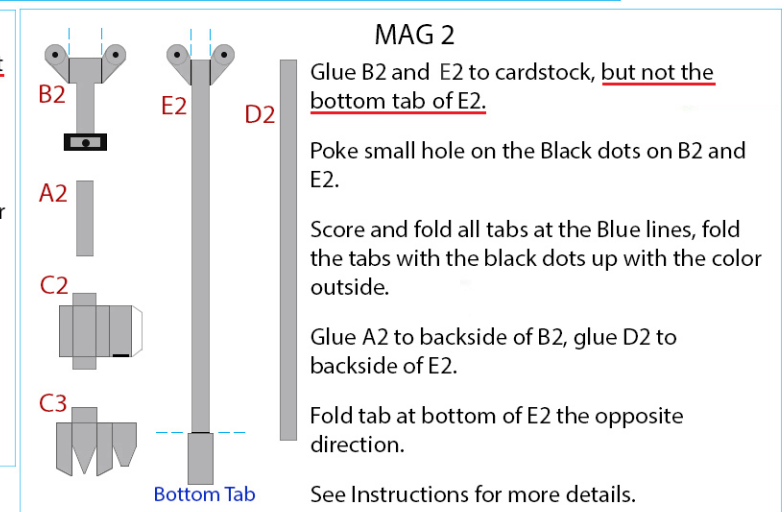
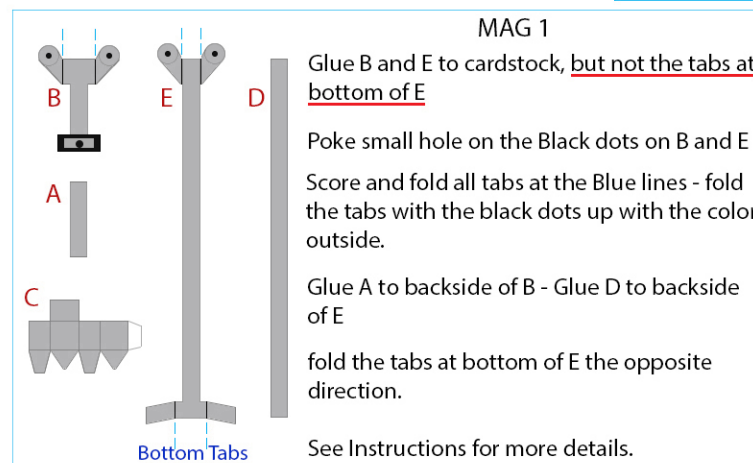
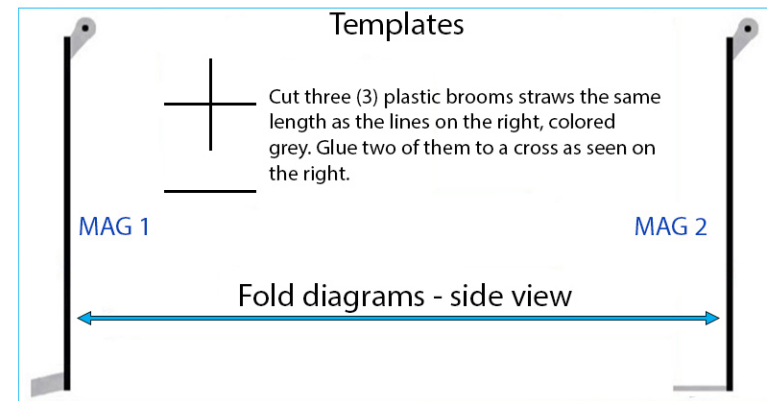
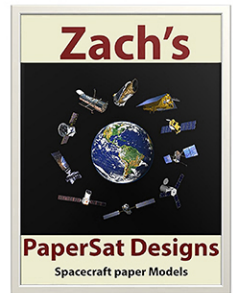
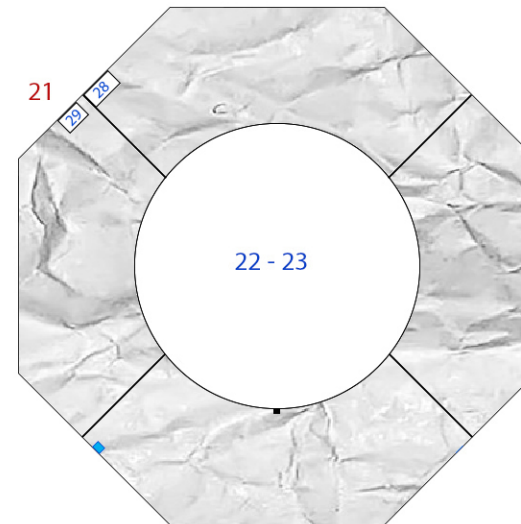
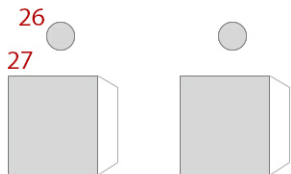
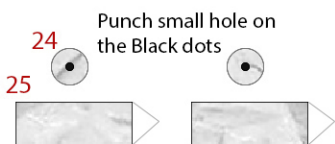
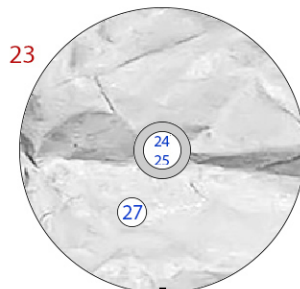
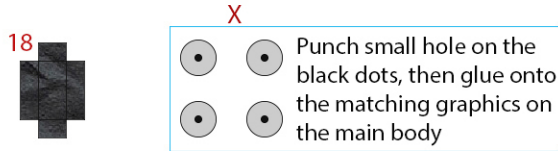
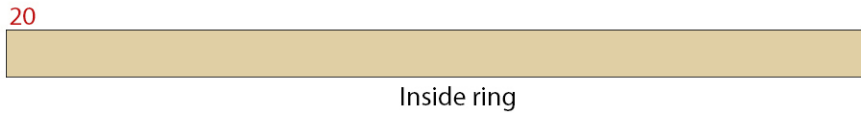
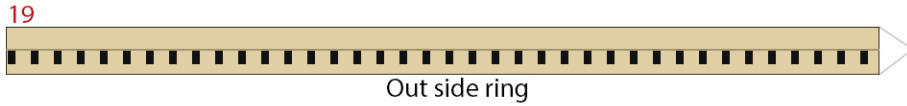
Optional Detail Parts
Cut out the 7 grey areas from part 1,
glue these behind the cutouts
before folding the main body to an
Octagon box.



Poke small holes on the black dots inside
the four grey circles



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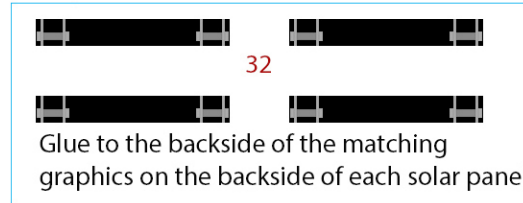
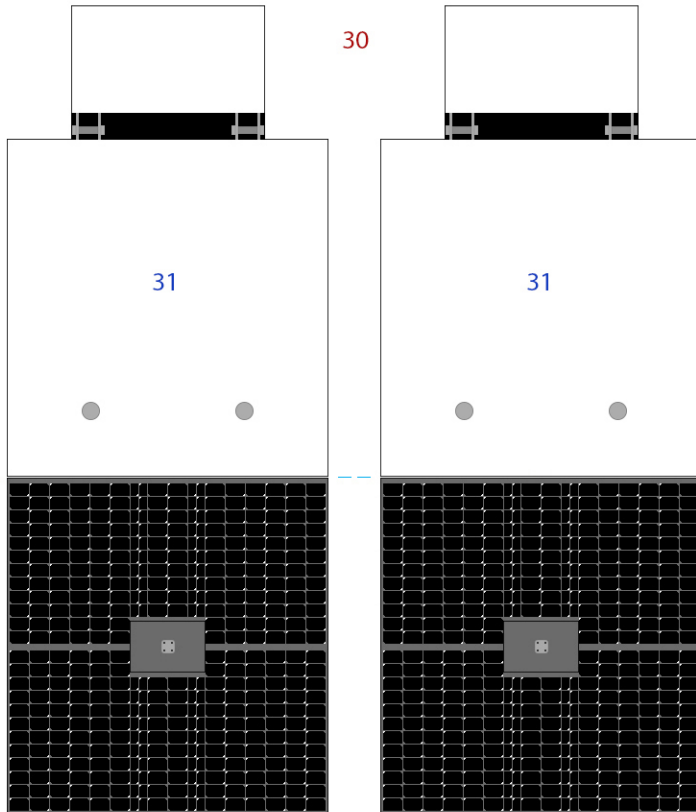


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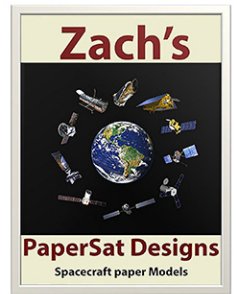
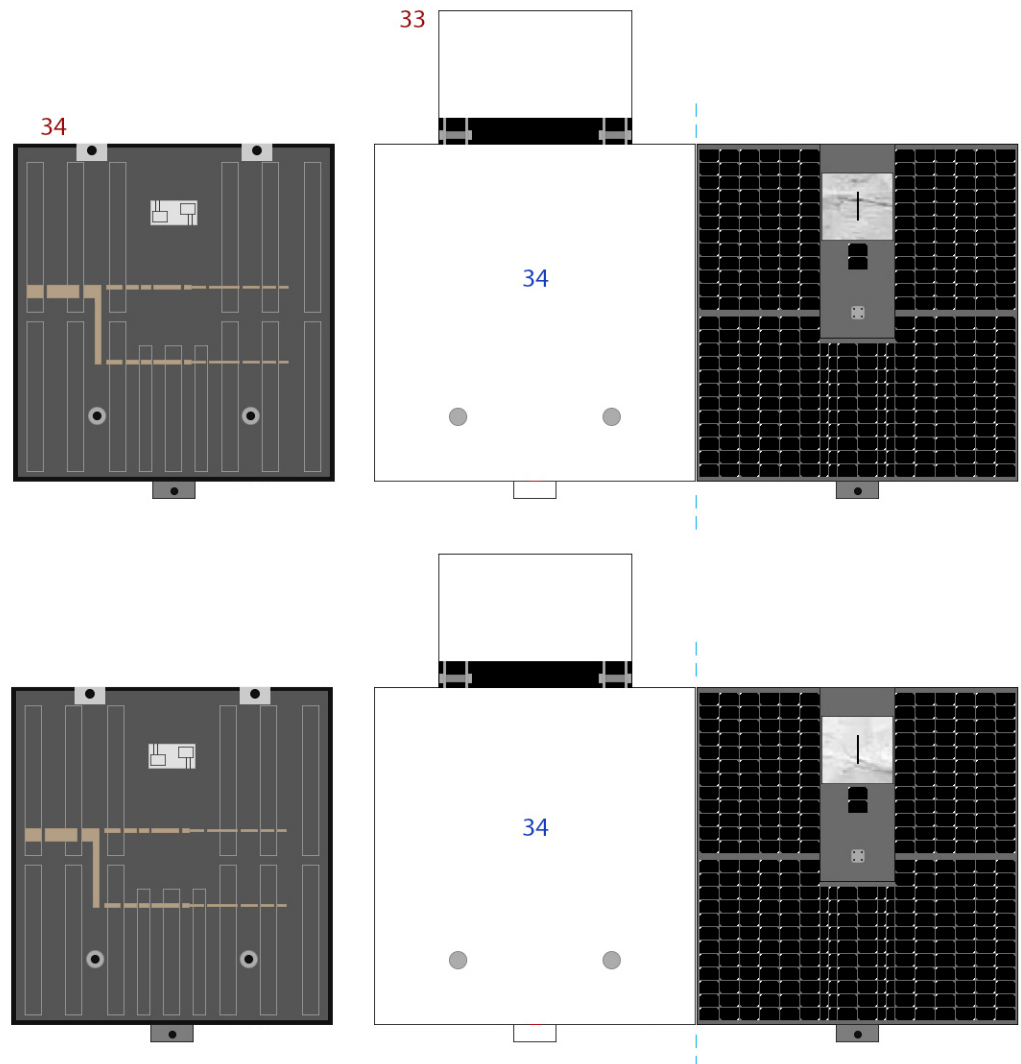
Cut a thin music wire or similar material around 1 mm diameter the same length as the line above - colored grey or silver
Make 2 of these.

Cut four (4) plastic broom straws or similar material around 5 inches long, colored grey for the whip antennas.

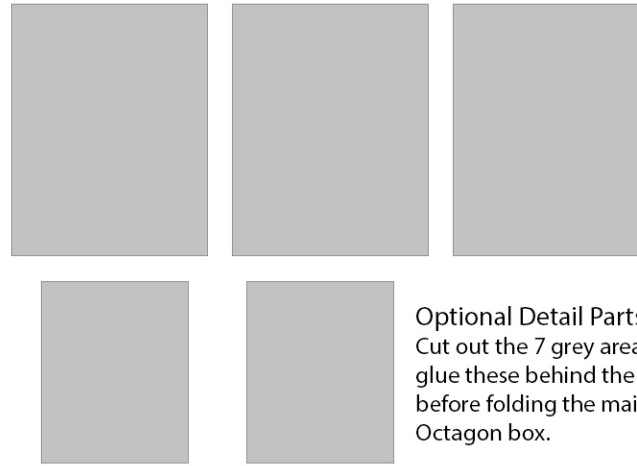
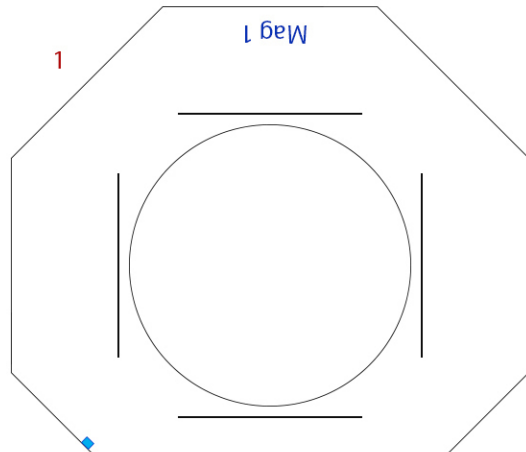
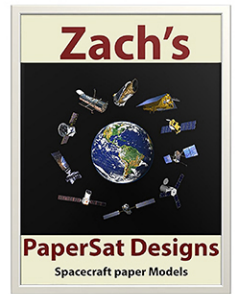
Score, fold each solar panel back-to-back at the Blue lines



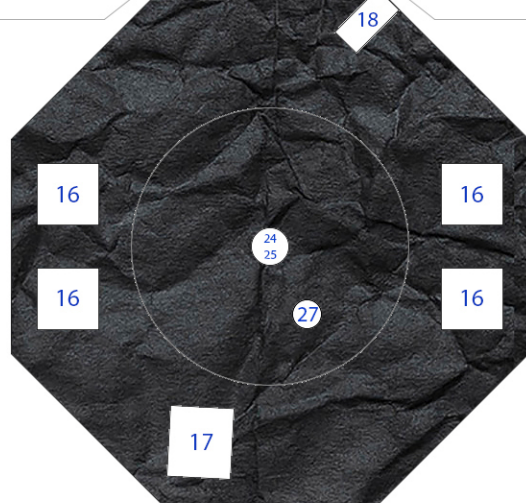
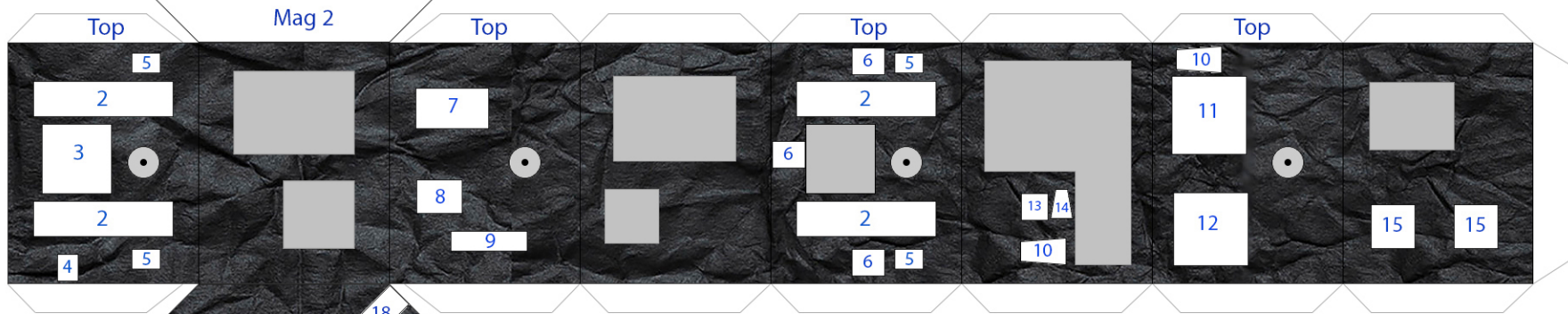
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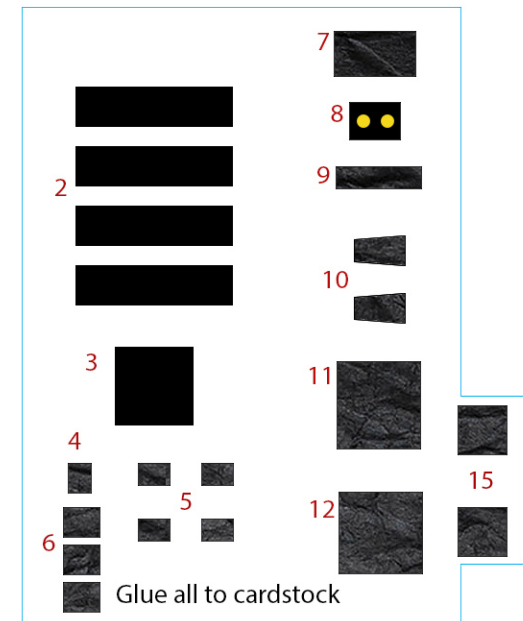
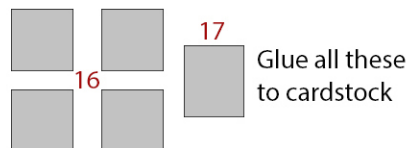
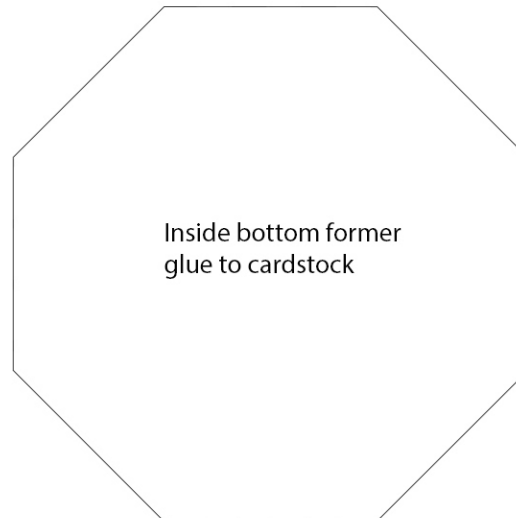
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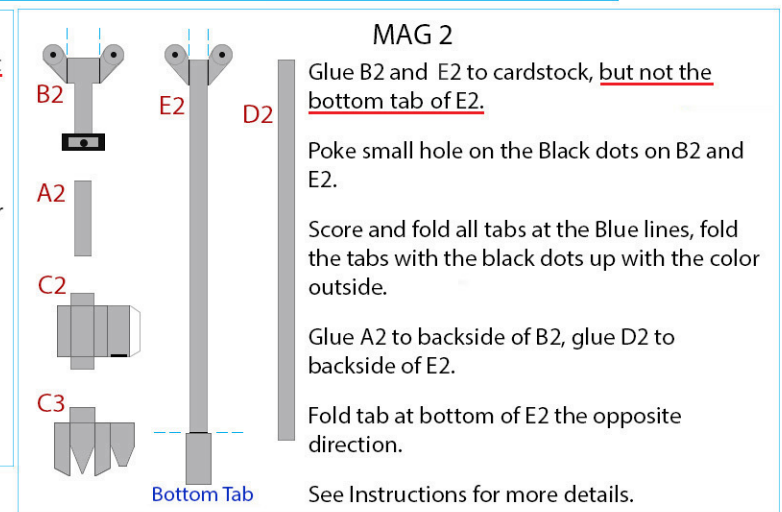
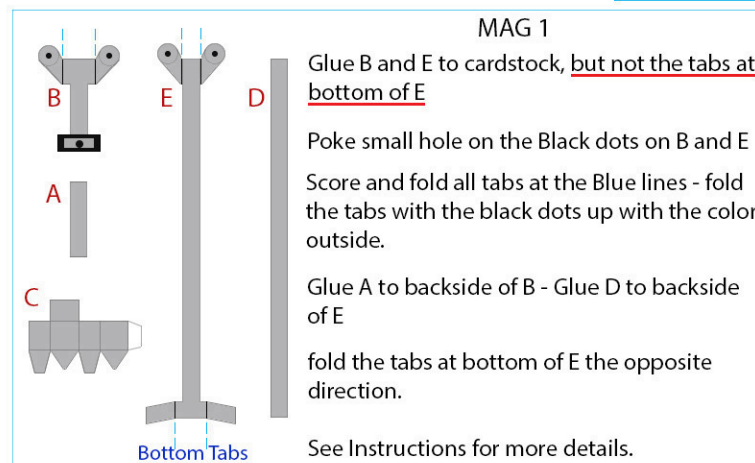
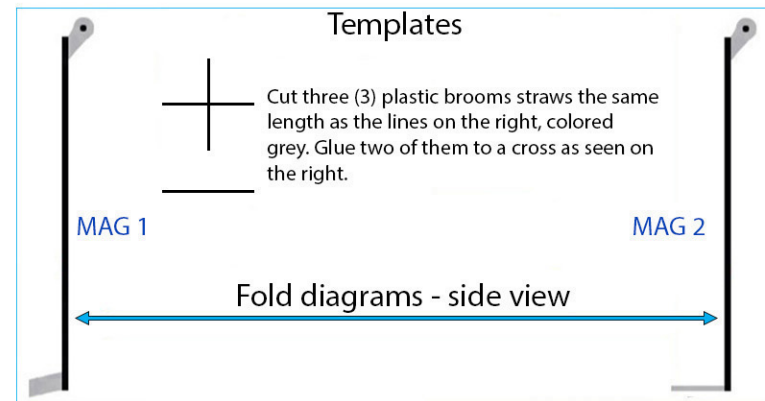
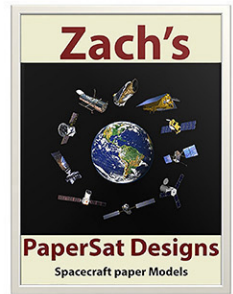
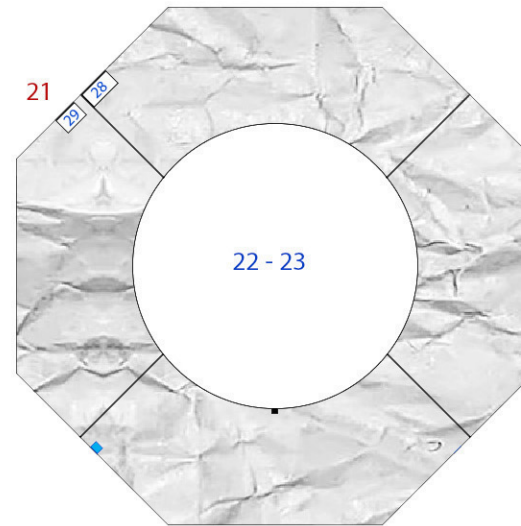
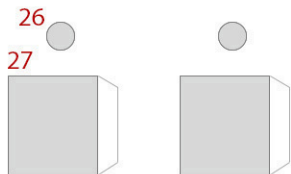
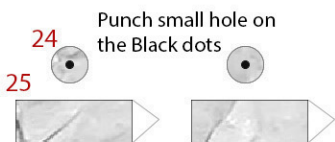
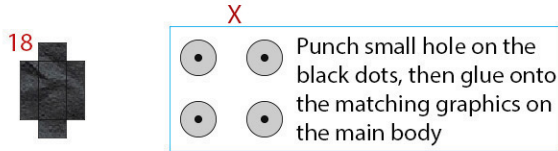
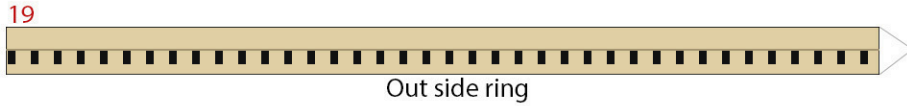
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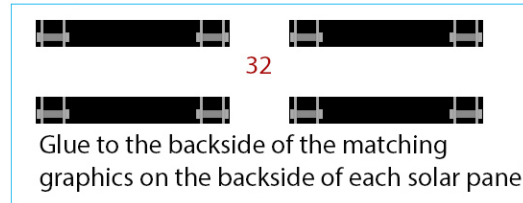
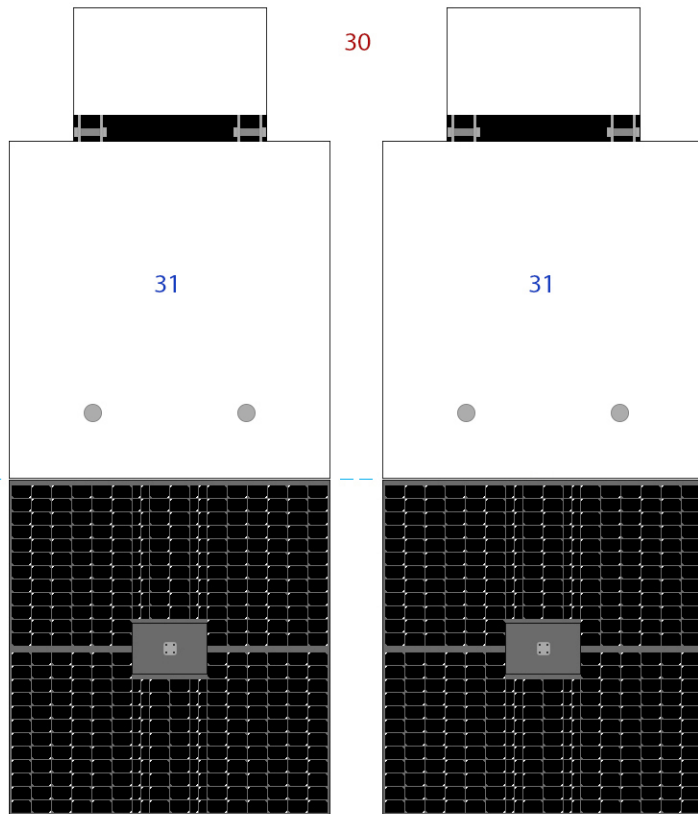


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