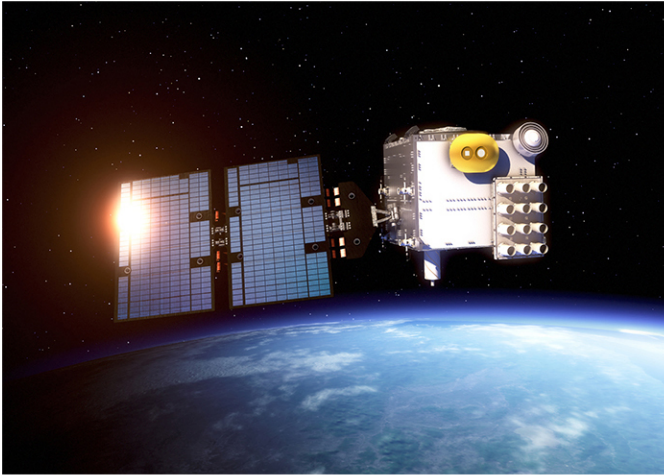


COSMIC - 2 (Constellation Observing System for Meteorology, Ionosphere, and Climate)



FORMOSAT-7/COSMIC-2 (Constellation Observing System for Meteorology, Ionosphere and Climate) is an international collaboration between Taiwan (NSPO) and the United States (NOAA) that will use a constellation of twelve remote sensing microsattellites to collect atmospheric data for weather prediction and for ionosphere, climate and gravity research. It is a follow up mission to the FORMOSAT-3/COSMIC mission.

The U.S. Air Force is partnering on COSMIC-2 and will provide two space weather payloads that will fly on the first six satellites: RF Beacon transmitters and Velocity, Ion Density, and Irregularities (VIDI) instruments.

The new constellation provides improved performance and a five times increase in number of measurements. The precision will also be improved.

With the continued operation of COSMIC-1 and the execution of the COSMIC-2 mission, radio occultation data will continue to be available to support research and operations for many more years to come.

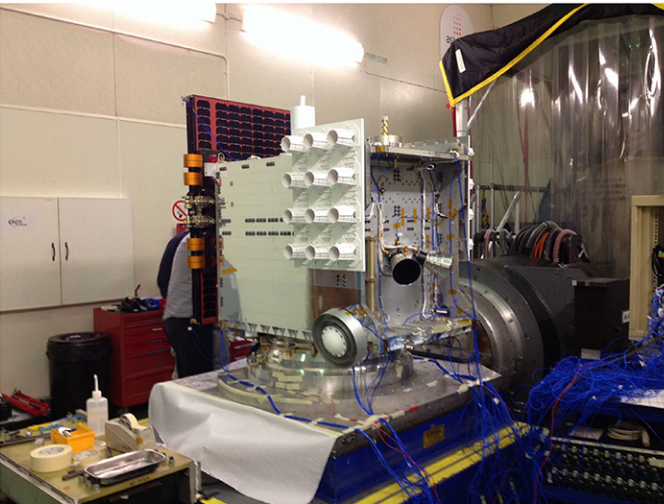
With nearly an order of magnitude more RO data expected to be available from COSMIC-2, unprecedented research opportunities will open up for hurricane analysis and prediction, Madden-Julian Oscillation (MJO), and climate processes, just to name a few.

3D printed antenna arrays:

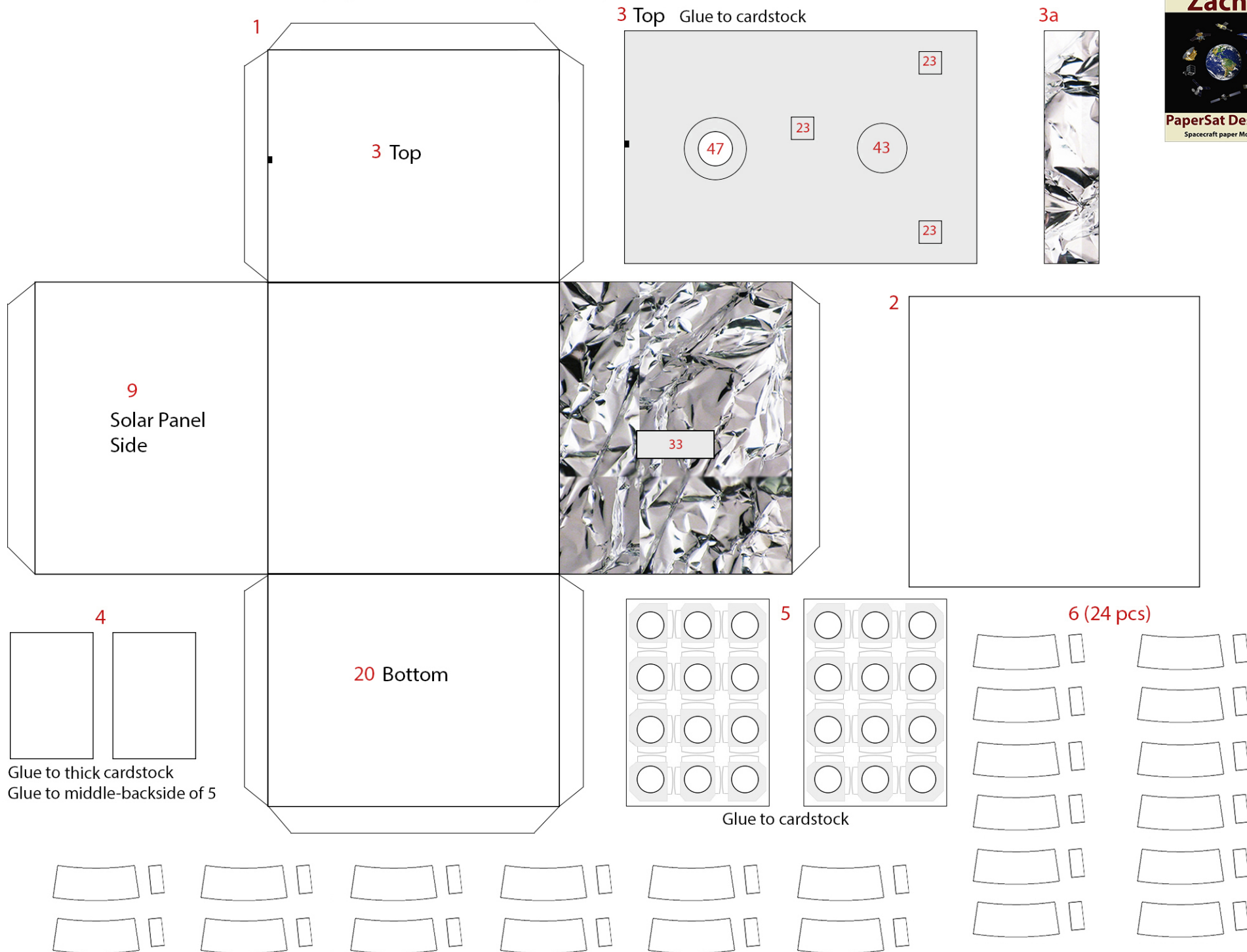
In 2014, RedEye, a Stratasys Company and leading provider of 3D printing services, partnered with NASA/JPL to 3D print 30 antenna array supports for the FormoSat-7 /COSMIC-2 satellite mission.

This is the first time 3D printed parts will function externally in outer space. The antenna arrays will capture atmospheric and ionospheric data to help improve weather prediction models and advance meteorological research on Earth.

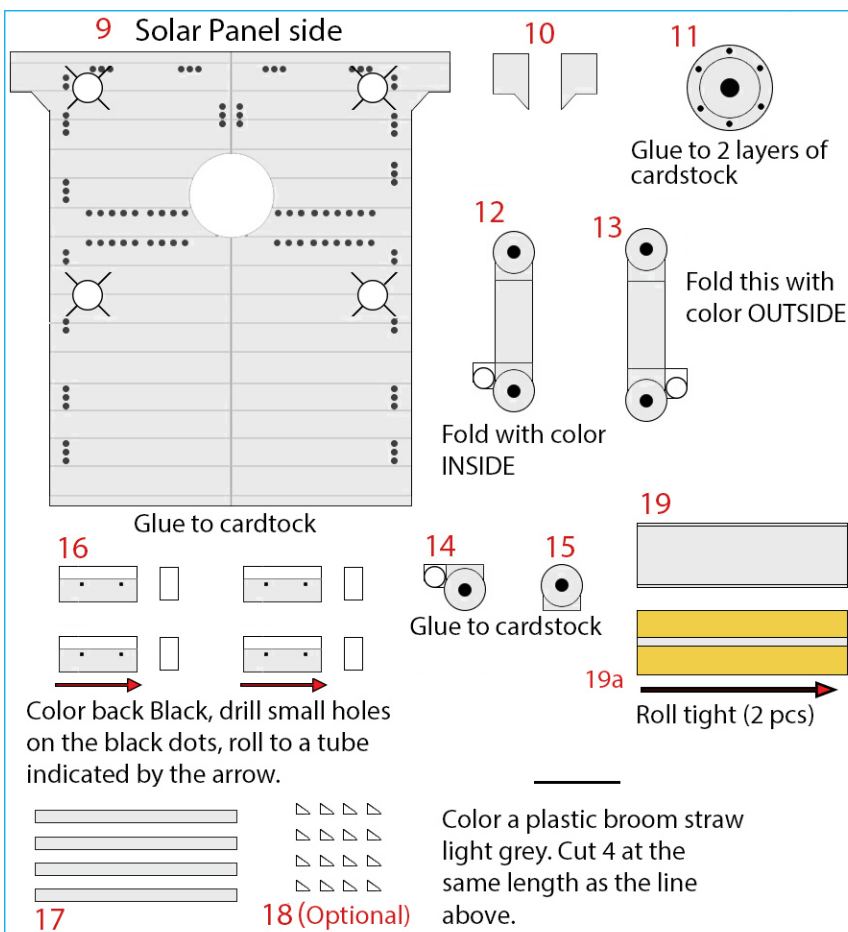
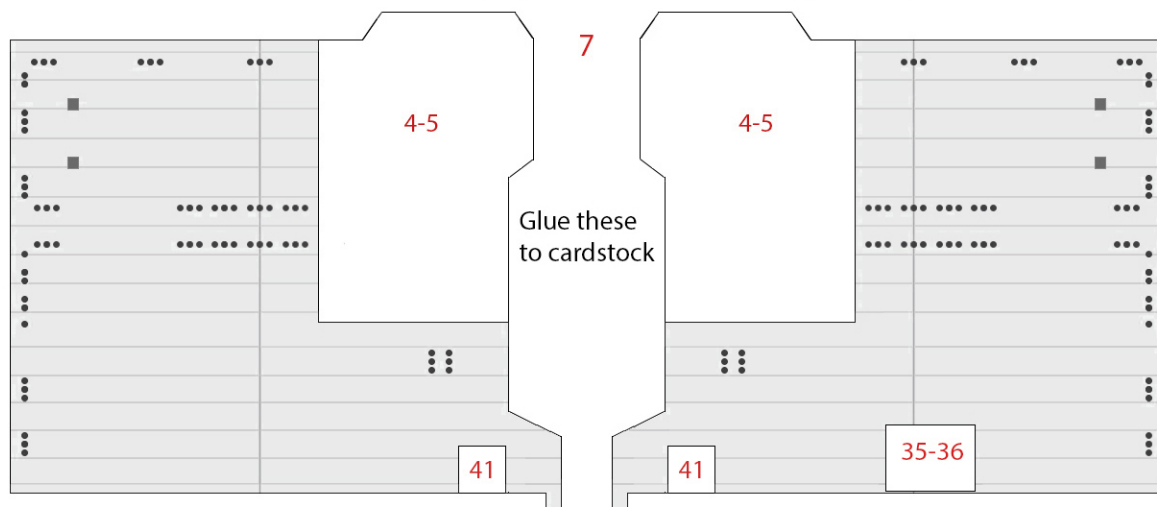
The first launch of six satellites of the low inclination constellation is planned for September 2017, the second launch into the high inclination orbits will take place in 2020. The last launch might include a seventh back-up satellite.



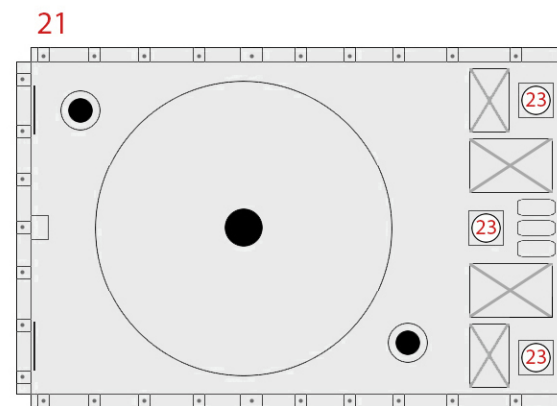
COSMIC - 2 (Constellation Observing System for Meteorology, Ionosphere, and Climate)



COSMIC - 2 (Constellation Observing System for Meteorology, Ionosphere, and Climate)



20 Bottom

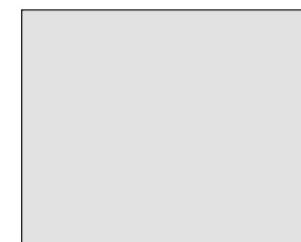


22



Color back Black - roll to a ring

Optional Detail Parts



Glue all parts below BEHIND the rectangle for color on both sides.



Cut on the middle lines on parts above.



Cut out the sections with the "X" on Part 21. Glue these into the open areas forming the "X's" for a 3D effect.

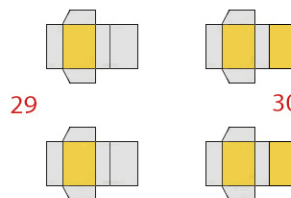
28



Color back Black
Roll into rings



Glue to cardstock



30

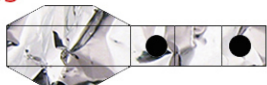
COSMIC - 2 (Constellation Observing System for Meteorology, Ionosphere, and Climate)

31

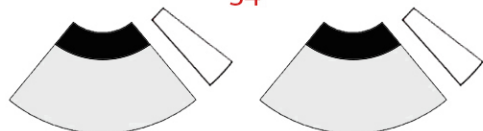
32

Bottom supports

33

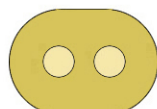


34



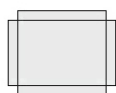
Color back Black

35

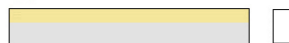


Glue to cardstock

36



43

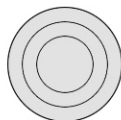


Roll to a ring

44



37



42



38



39



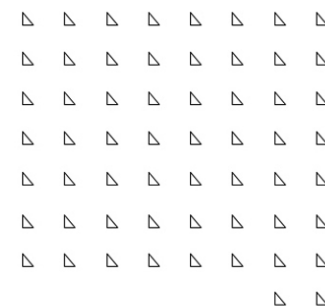
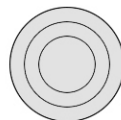
40



41



Color back sides of 38-40 light grey.



BOTTOM Optional Detail Parts with 4 spares.

45



46



47



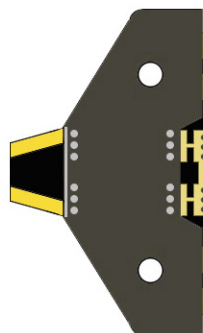
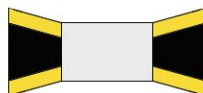
Roll to a ring

48

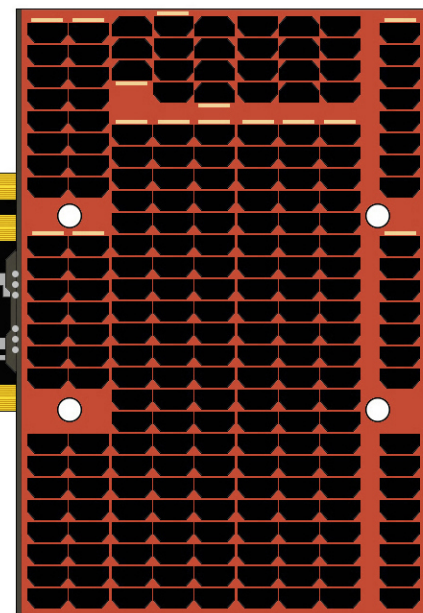
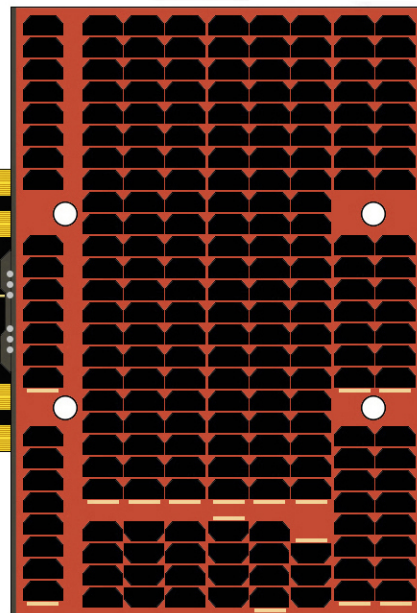


Front Solar Panels
Remove the white circles

50



49



Zach's



PaperSat Designs
Spacecraft paper Models

Backside solar panels - remove the white circles

