Hurricanes, tornadoes, blizzards, heat waves!

Extreme weather events have pummeled the United States the past few years. We rely on satellites orbiting Earth to predict and track these events and to monitor our global climate.

Using its five instruments, the Suomi NPP spacecraft gathers vital data for weather forecasting and climate modeling. Ball Aerospace built OMPS, the instrument that measures atmospheric ozone. Ball also built the spacecraft’s bus, the main structure that carries and enables the instruments.

In October 2011, Suomi NPP was launched from Vandenberg Air Force Base in California. The spacecraft travels in a polar orbit about 500 miles above Earth.

Build your own Suomi NPP with this realistic model kit. It requires some patience, but it’s actually fairly easy to build.

Learn more at:
www.nasa.gov/npp
www.ball.com/aerospace

A Ball technician works on Suomi NPP inside a cleanroom.
GENERAL INSTRUCTIONS

Number/Color Code
• Parts are numbered in sequence of assembly.
• Black denotes the part.
• Blue indicates where to glue one part to another.

Line Code
Part outlines (cut lines)
Score and Mountain Fold (bend down) -
Score and Valley Fold (bend up) -
Location of an attaching part
Cut here
Roll or curve part

Tools You’ll Need
• Small scissors (for cutting all curved lines)
• A hobby knife with a new blade (but scissors are OK)
• A scribe, ball-point pen, small knitting needle or large smooth sewing needle (for scoring folds)
• A metal-edged ruler
• Dowel or round pencil; table edge is OK (for forming curved parts)
• A cutting board, if using a hobby knife (tagboard or cardboard is OK)
• Rubber or foam pad (for forming curved parts)
• Tweezers (for holding and bending small parts)
• White glue
• Toothpicks (for glue applications)

Procedure
1. Score each part before cutting out.
2. Cut out and assemble in numerical sequence.
   Caution: Hobby knives are extremely sharp!
3. Fold parts as instructed by line code.
4. Checkfit each part before gluing, matching alignment as indicated.
5. Assemble using minimal glue; wipe off excess.

Forming the Parts
Scoring
Always score a part before you cut it out! Scoring slightly weakens the paper so you can make perfect folds. To score, line up a metal-edged ruler with a score line. Then use a scribe or other round-tipped tool, and firmly draw along the ruler.

Making Cylinders
Glue tabs or strips should remain attached during forming. To form a cylinder, slide a dowel or round pencil over the part, using a rubber or foam pad underneath. Face part up or down as required. Part will curve up at the ends, becoming cylindrical. Repeat forming process until desired shape is attained. Drinking straws cut to size will also work.

Gluing
It is best to use glue very sparingly; too much results in warping and excessive drying times. Use a toothpick with a small puddle of glue on scrap paper. Do not try to glue too much at a time on any part. Glue only 4 or 5 tabs at a time, and let them dry before moving on.
After cutting out these four panels, match the symbols and slide the panels together.
After assembling these two parts, align the blue areas and glue them together.
After assembling these two parts, align the blue areas and glue them together.
Optional Solar Array Extension
(if using this part, glue to part 19 before attaching the complete array to the model.)
Finished Suomi NPP Model Parts

1. Internal Support Structure
2. Bus
3. Propulsion Tank
4. GPS Antenna
5. Star Trackers
7. Solar Panel Mount and Antenna
8. VIIRS Optics Module
9. VIIRS Electronics Module
10. CrIS
11. ATMS
12. CERES
13. OMPS Sensors
14. OMPS Main Electronics Box
15. Antennas
16. Solar Array
17. Model Stand
18. Radiator Side View
19. All Parts