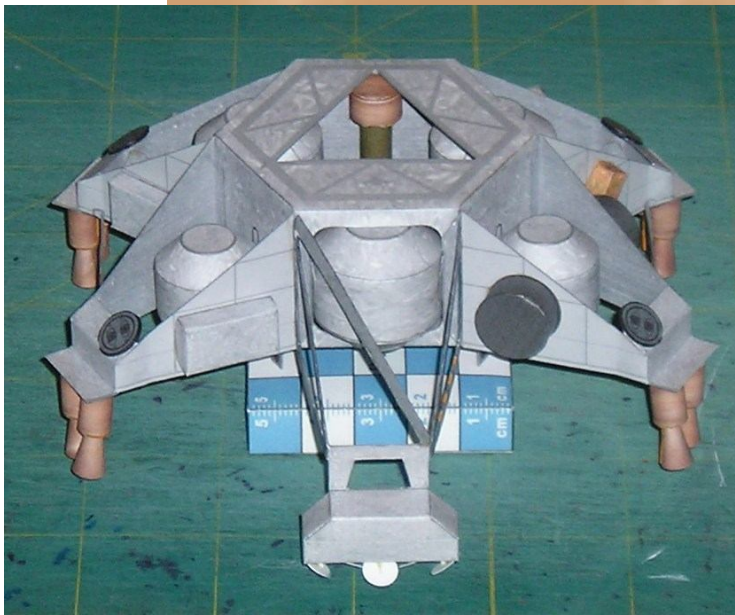
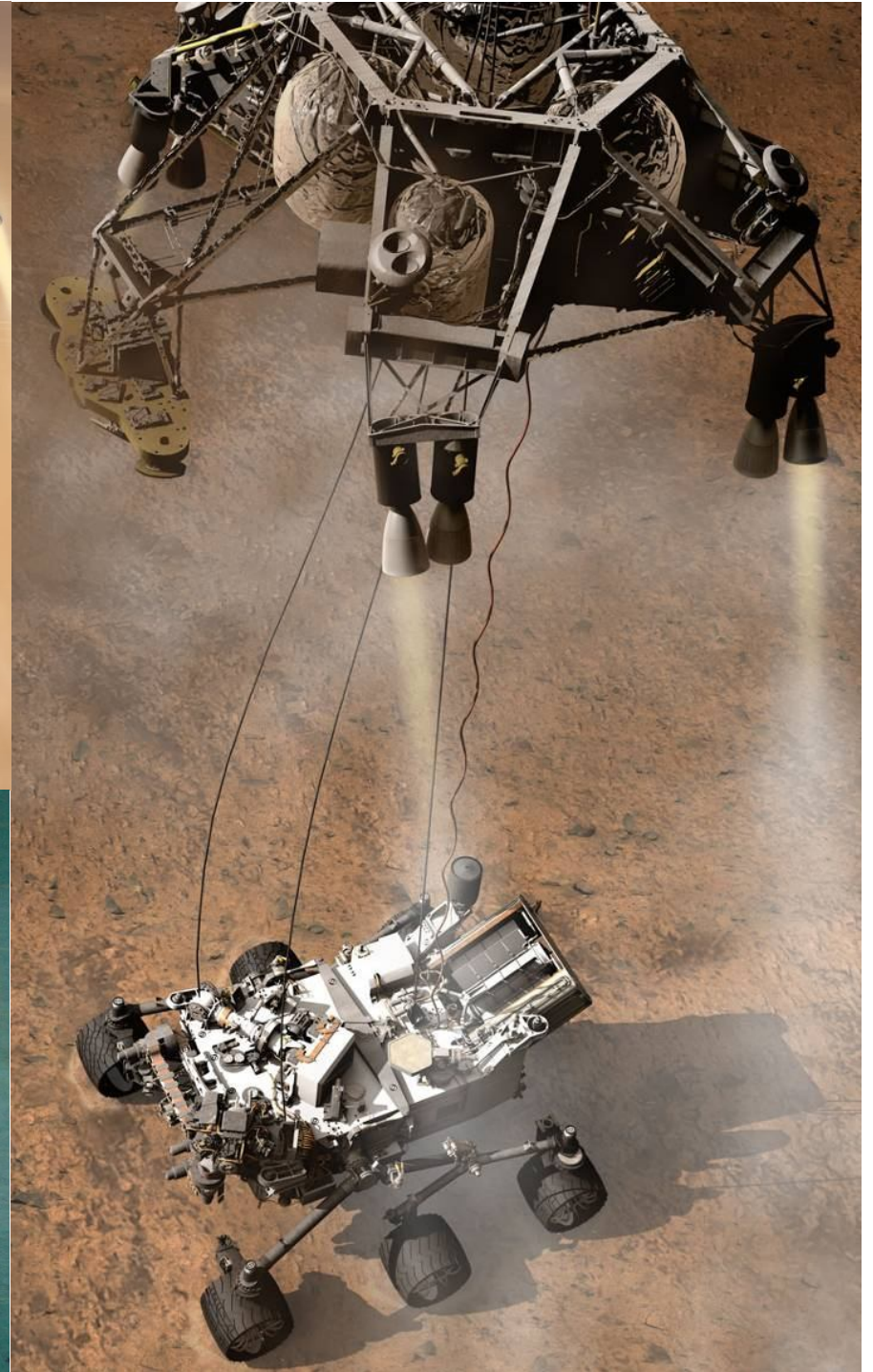
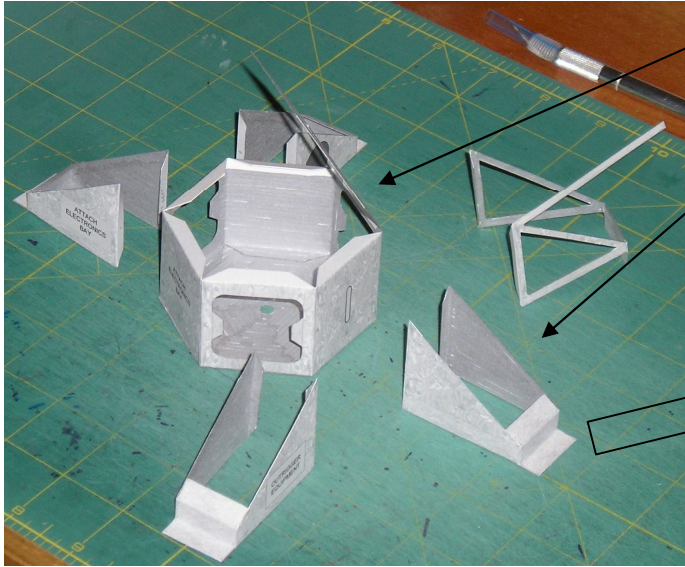


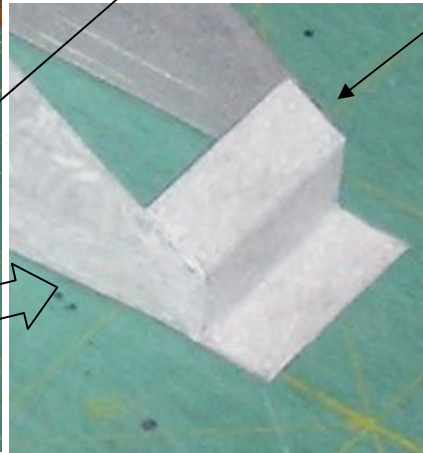
Mars Science Laboratory Skycrane

The Mars Science Lab mission will use a novel method to land the large Curiosity Rover. The landing rockets are part of a "Skycrane" that will separate from the aeroshell with the lander attached. The Skycrane/lander will slow to a hover using the Skycrane's rockets, then lower the lander to the surface using tethers. The lander will unfold its suspension and wheels as it is lowered. Once on the surface of Mars, the lander will release the tethers to the skycrane and the skycrane will fly away to a crash landing – leaving the Rover to begin its mission of exploration.





1. Form central hexagonal box, leaving the top open for access. Color inside silver/gray.
2. Form outriggers, gluing up the thruster brackets on the end as shown. Color back side silver/gray.



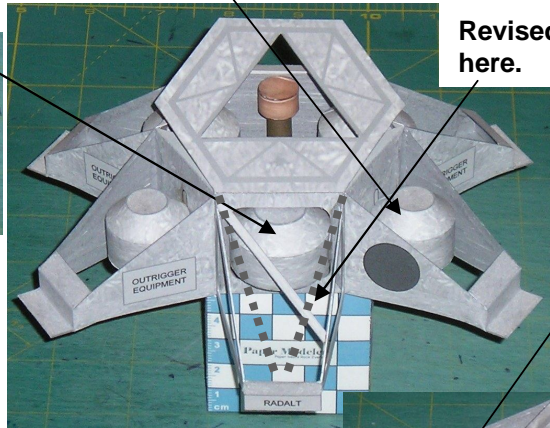
3. Glue the outriggers to the hex box.
4. Assemble winch and glue inside the hex box on the aft inner wall.



5. Form the propellant tanks and glue in place. The small tanks glue to the face of the box where indicated. The large tanks fit inside the openings in the hex box, projecting out slightly less than half-way.

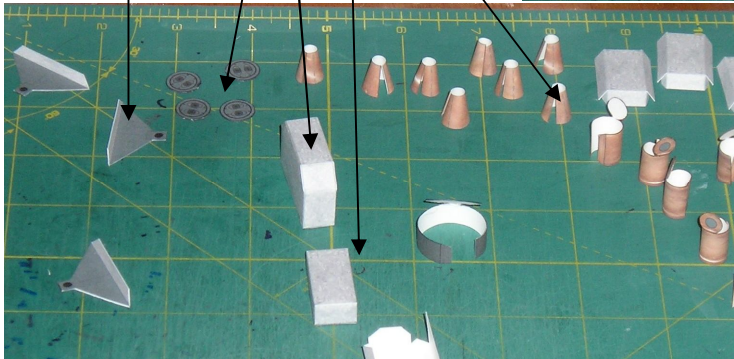


PROPELLANT TANK PARTS

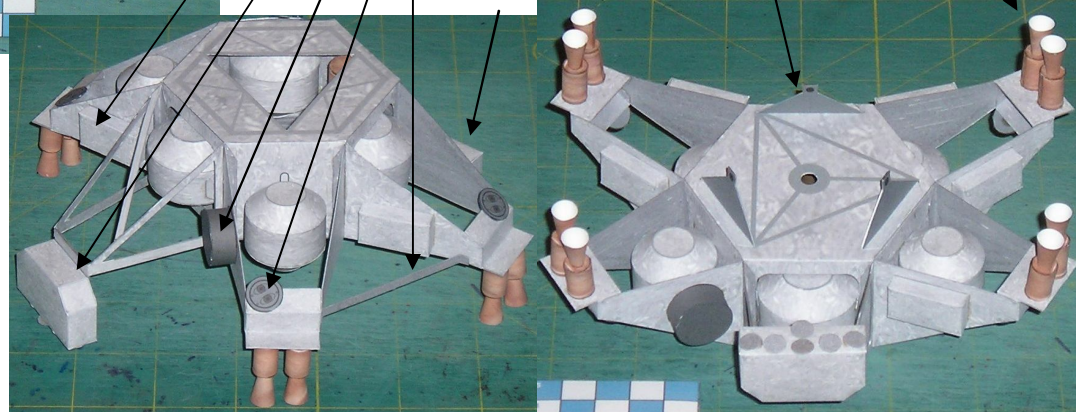


Revised brace goes here.

6. Form the various thrusters, equipment boxes, radar altimeter, outrigger pads, rover latches, etc.



7. Glue in place the: equipment boxes, radar altimeter, fwd housing, outrigger pads, outrigger brace, and electronics bays.
8. Glue on the thrusters and rover latches.



Mars Science Laboratory – Skycrane

1:24 scale

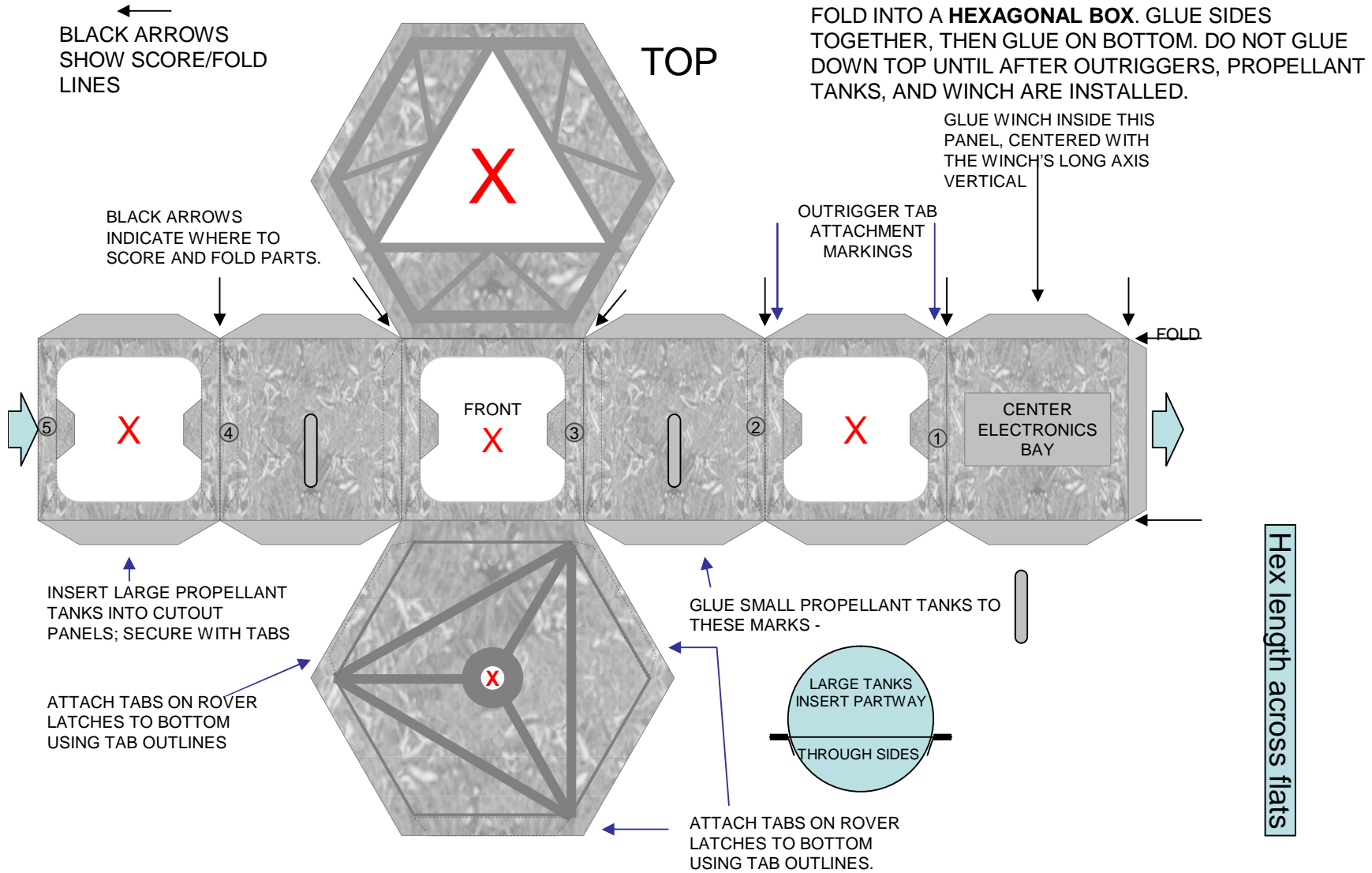
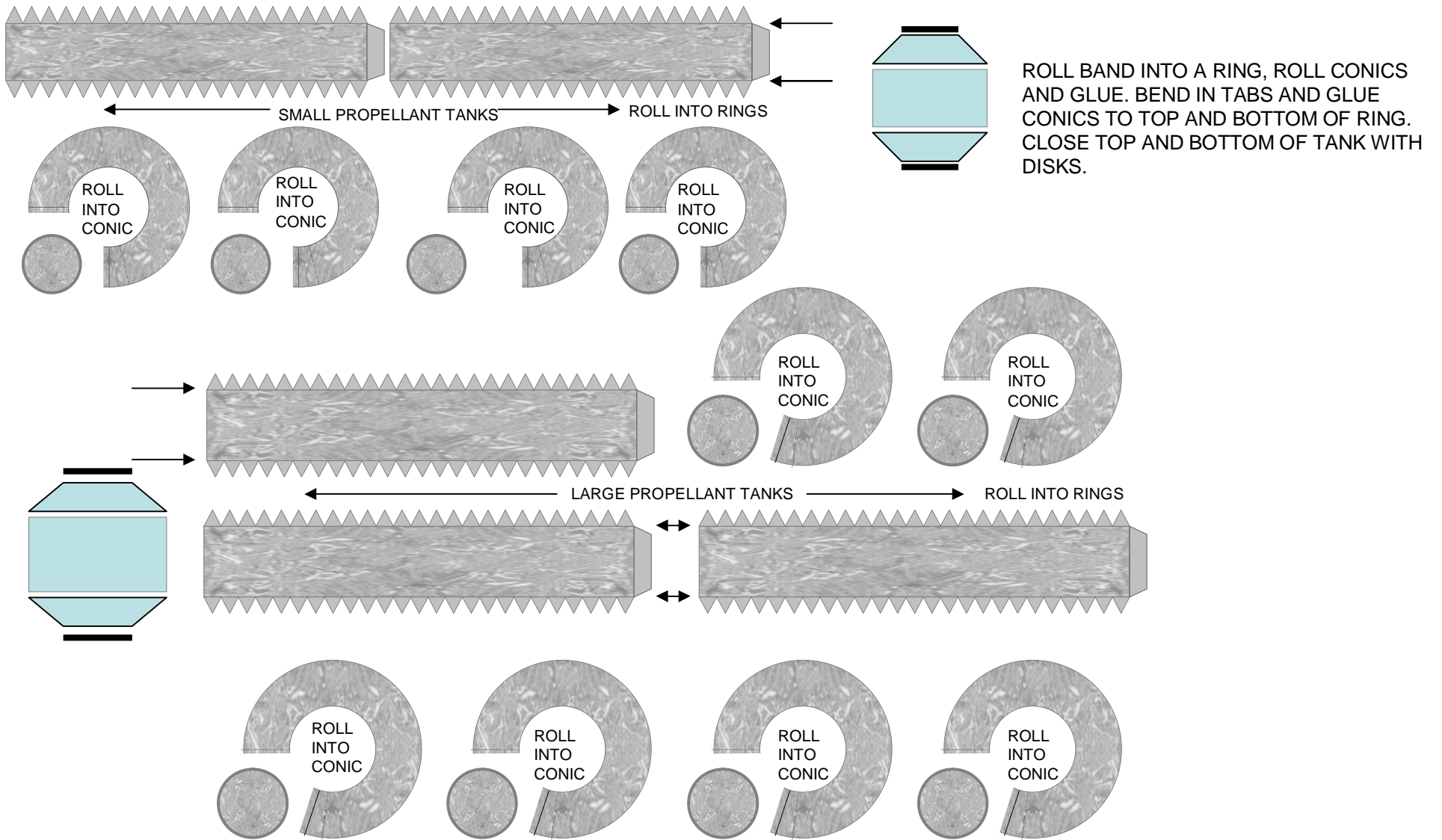


Photo measured scale point, descent stage is approximately 1.25m across from the front face to the back face.

Mars Science Laboratory – Skycrane

1:24 scale

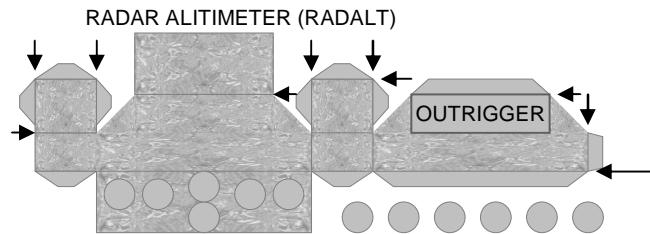
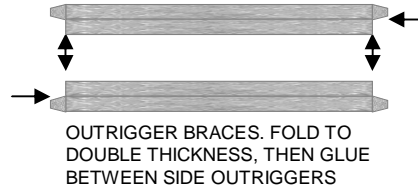
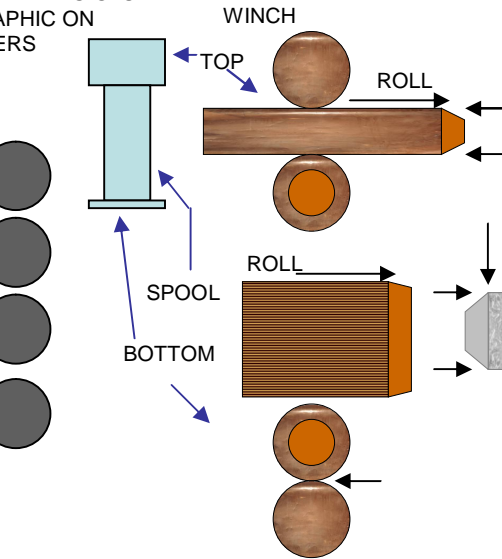
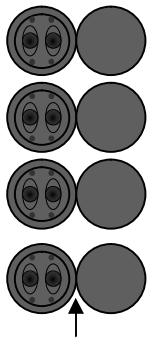


Mars Science Laboratory – Skycrane

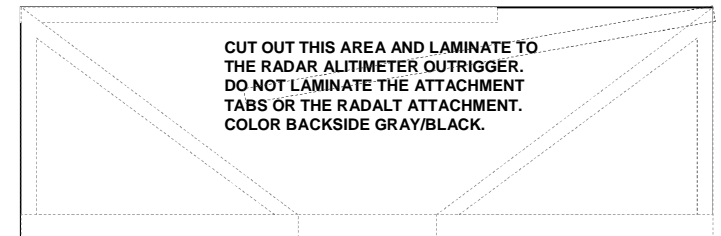
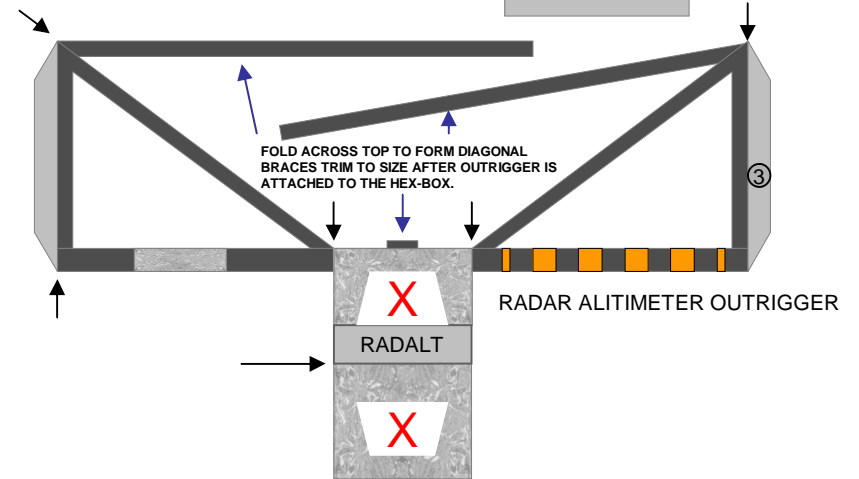
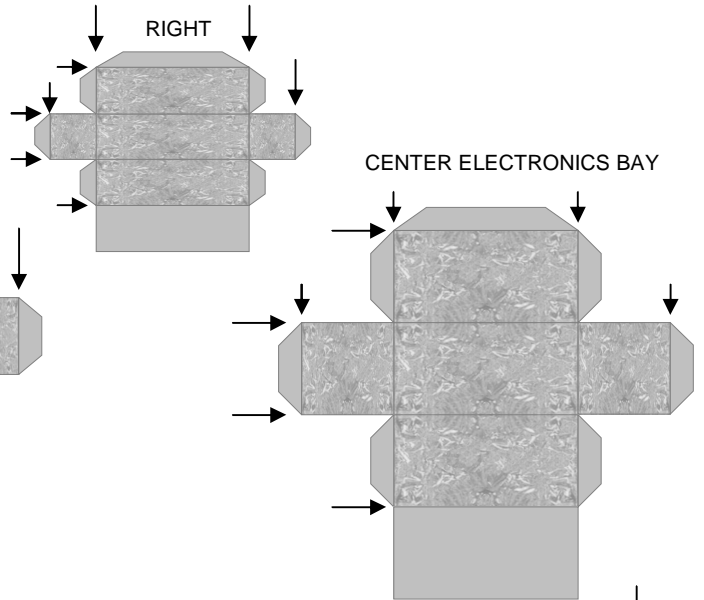
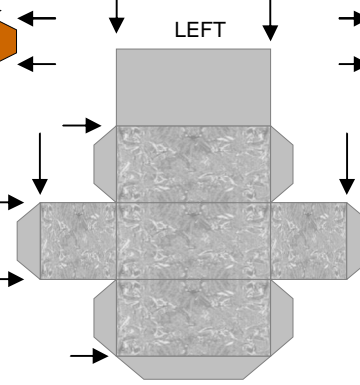
ROVER LATCHES -
GLUE TO BOTTOM OF
HEX BOX.



OUTRIGGER PADS-GLUE
OVER GRAPHIC ON
OUTRIGGERS

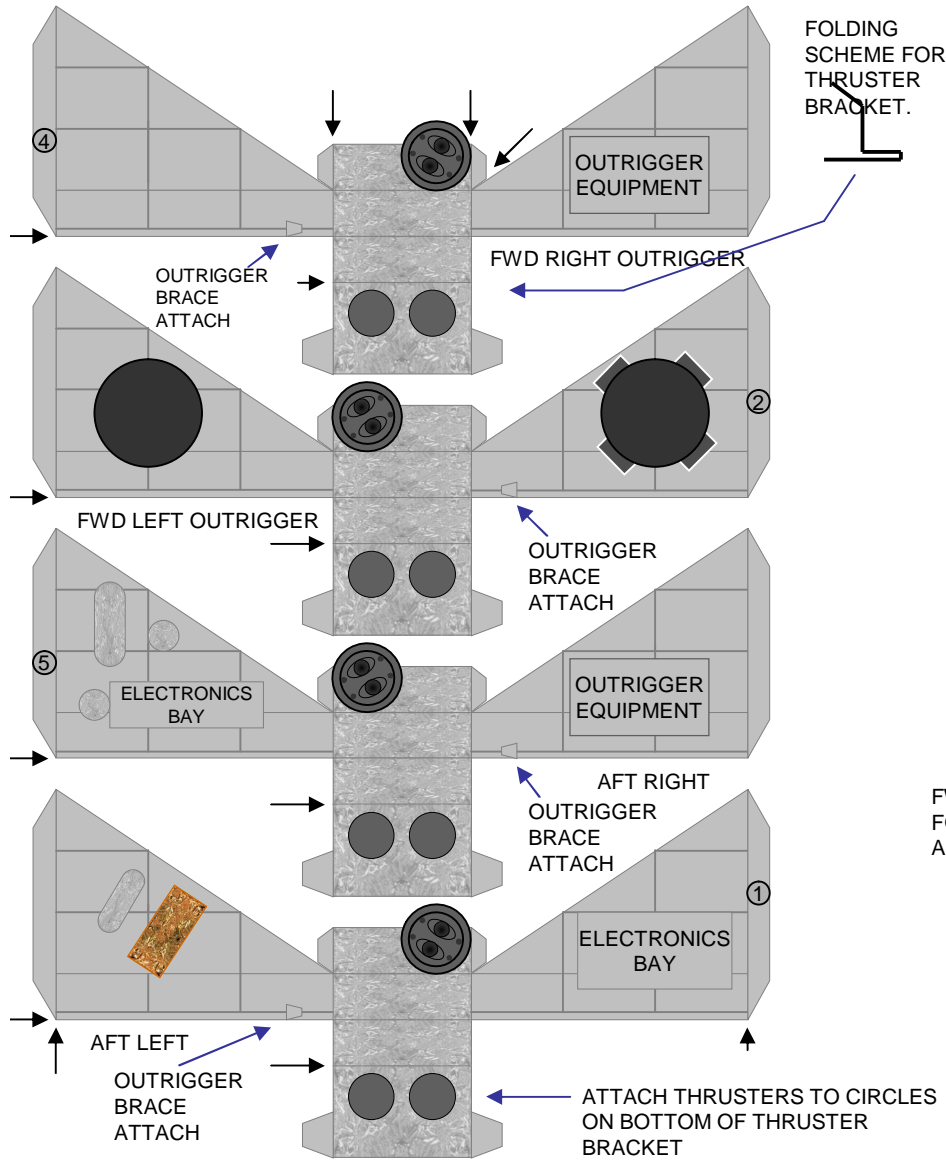


AFT ELECTRONICS
BAYS. FOLD INTO
BOXES AND GLUE TO
BACK SIDE OF AFT
OUTRIGGERS.



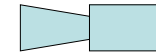
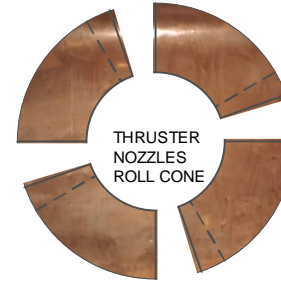
Mars Science Laboratory – Skycrane

1:24 scale

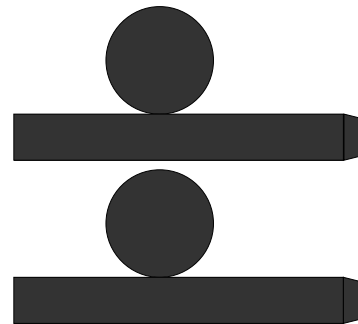


THRUSTER OUTRIGGERS. COLOR BACKSIDE OF PARTS SILVER OR GRAY. FOLD TABS& SIDE PANELS BACK. FOLD THRUSTER BRACKET AS INDICATED AND USE TABS TO SECURE TO SIDE PANELS. GLUE OUTRIGGERS TO SIDES OF CENTRAL HEX BOX USING GUIDE NUMBERS.

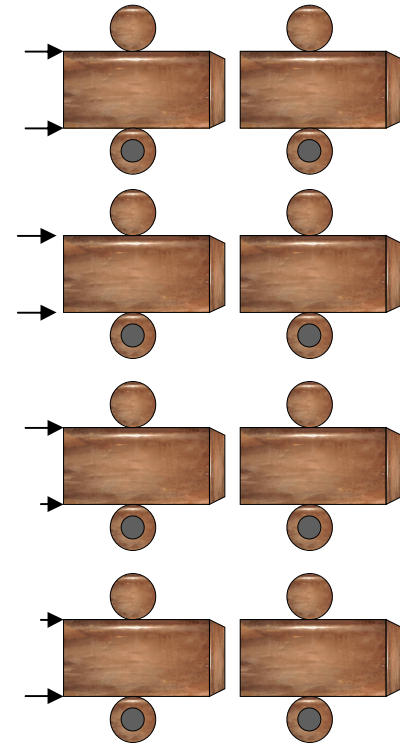
FOLDING SCHEME FOR THRUSTER BRACKET.



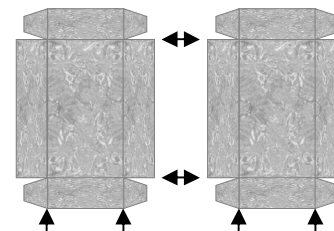
THRUSTERS – ROLL CYLINDER. FOLD DOWN TOP AND BOTTOM. GLUE NOZZLE TO DARK CIRCLE



FWD LEFT HOUSING – ROLL BAND, FOLD TOP DOWN. ATTACH TO FRONT AND BACK OF FWD LEFT OUTRIGGER.

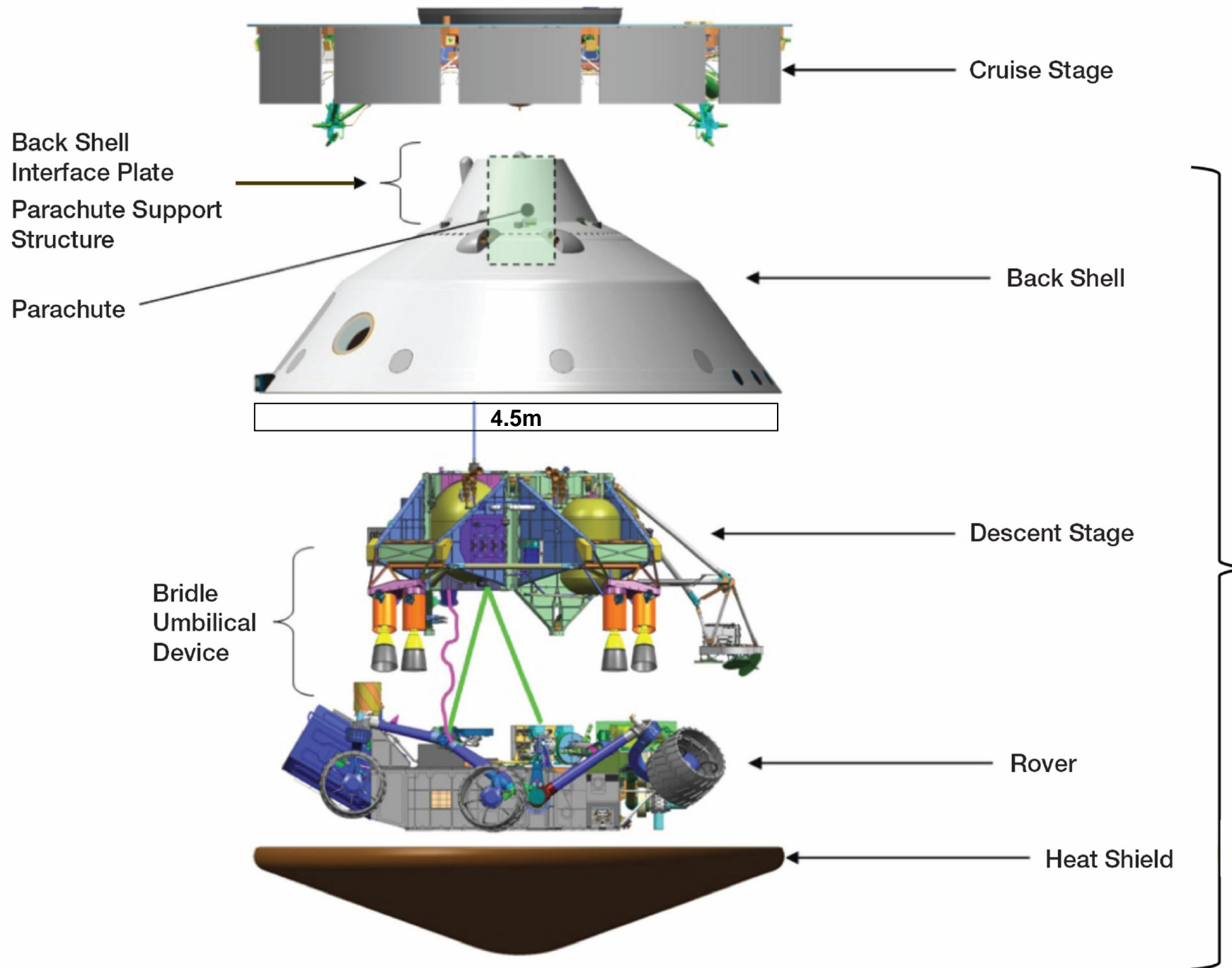


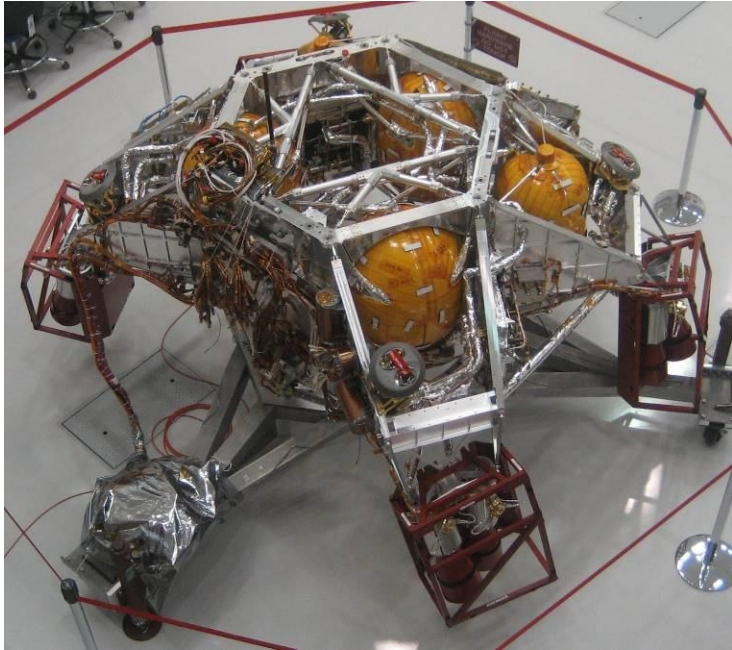
OUTRIGGER EQUIPMENT



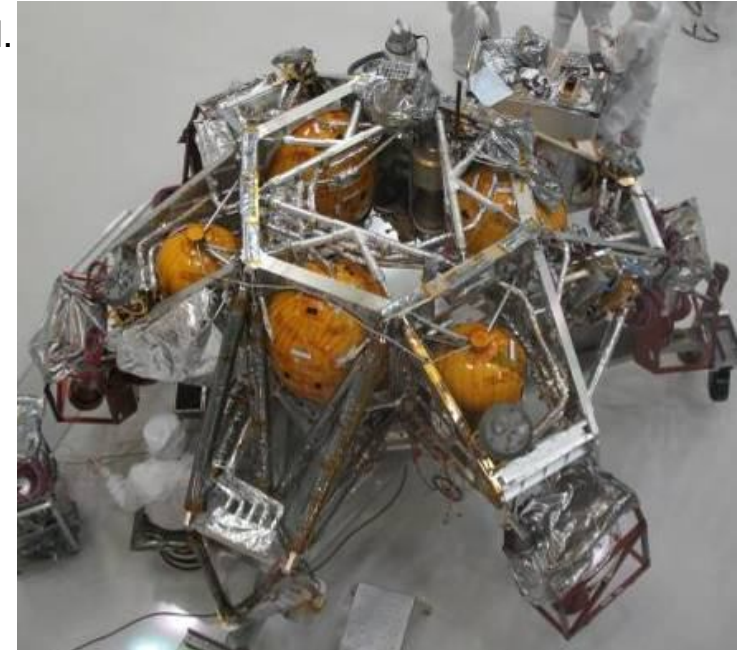
OUTRIGGER EQUIPMENT-FRONT SIDE OF AFT LEFT OUTRIGGER







Skycrane being assembled.



Skycrane fit checks with partial rover chassis.



Skycrane just before integration with aeroshell and rover prior to launch.

