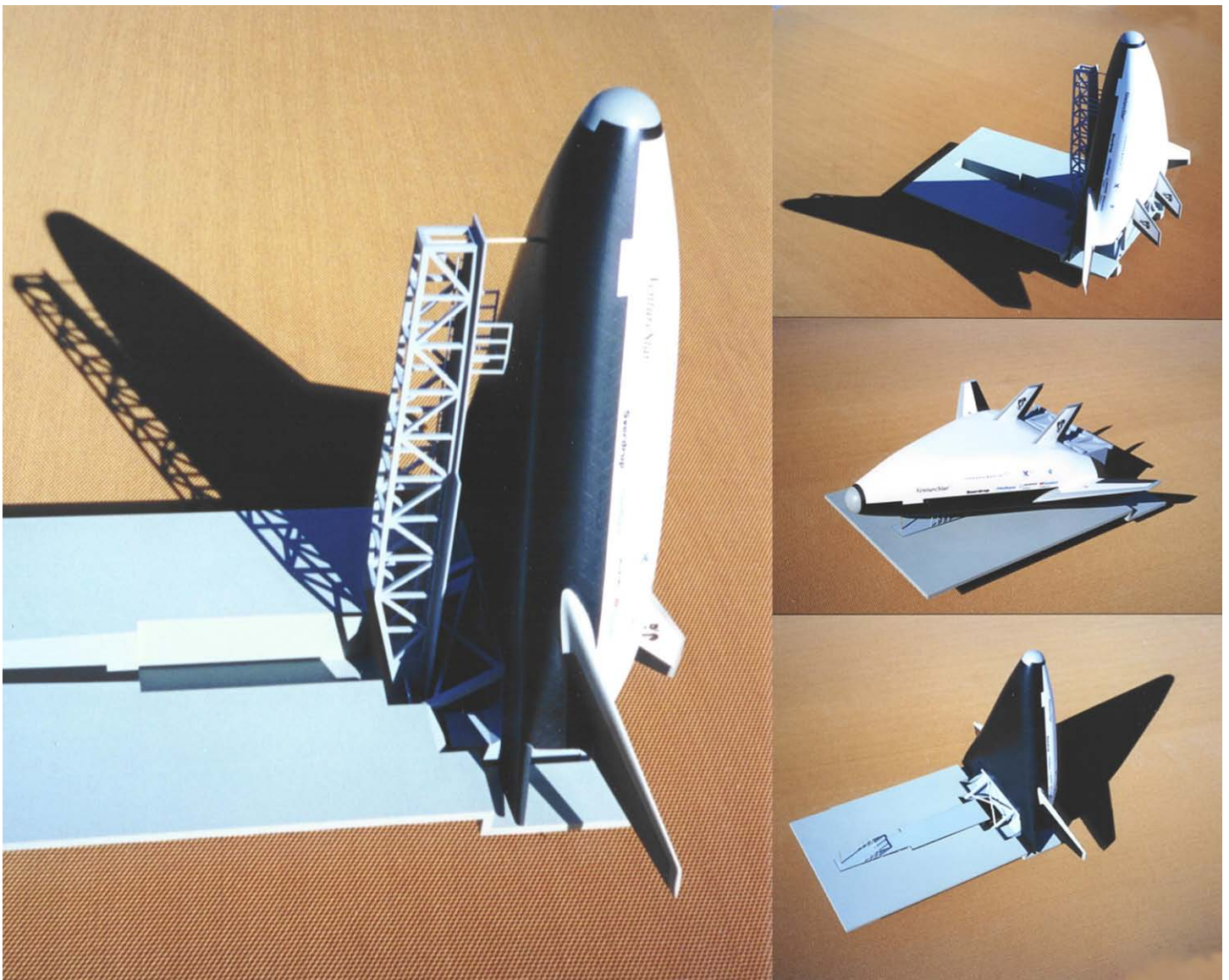




X-33 Competition models 1/100th

Set of three 1/100th scale models showing the three competing designs from Lockheed, Boeing and McDAC. Sets given to Dan Goldin, Al Gore and the NASA RLV managers. Models are cast urethane.





X-33 1/50th scale with Launch Mount base

Later version of the X-33 displayed on the Rotating Launch Mount located at Edwards AFB, These models were given to VIPs for use in meetings and public events. Etched panel lines showed the T.P.S. layout in detail and the Launch Mount was repositionable like the actual structure. Models were cast urethane with foam cores, bases were cast urethane and sheet acrylic.





X-33 1/25th scale final configuration

This is the final configuration of the X-33. The larger scale models are produced in fiberglass and can be displayed indoors or out. The tooling masters are CNC milled high density urethane foam and have a very accurate outer mold line (OML). The X-33 was built in 1/8th, 1/15th, 1/25th, 1/50th, 1/100th scales. All models were detailed with panel lines and textures showing the T.P.S. layout. The renderings at the bottom of the picture are the CGI images produced by NASA, the same CAD data was used to make the models.

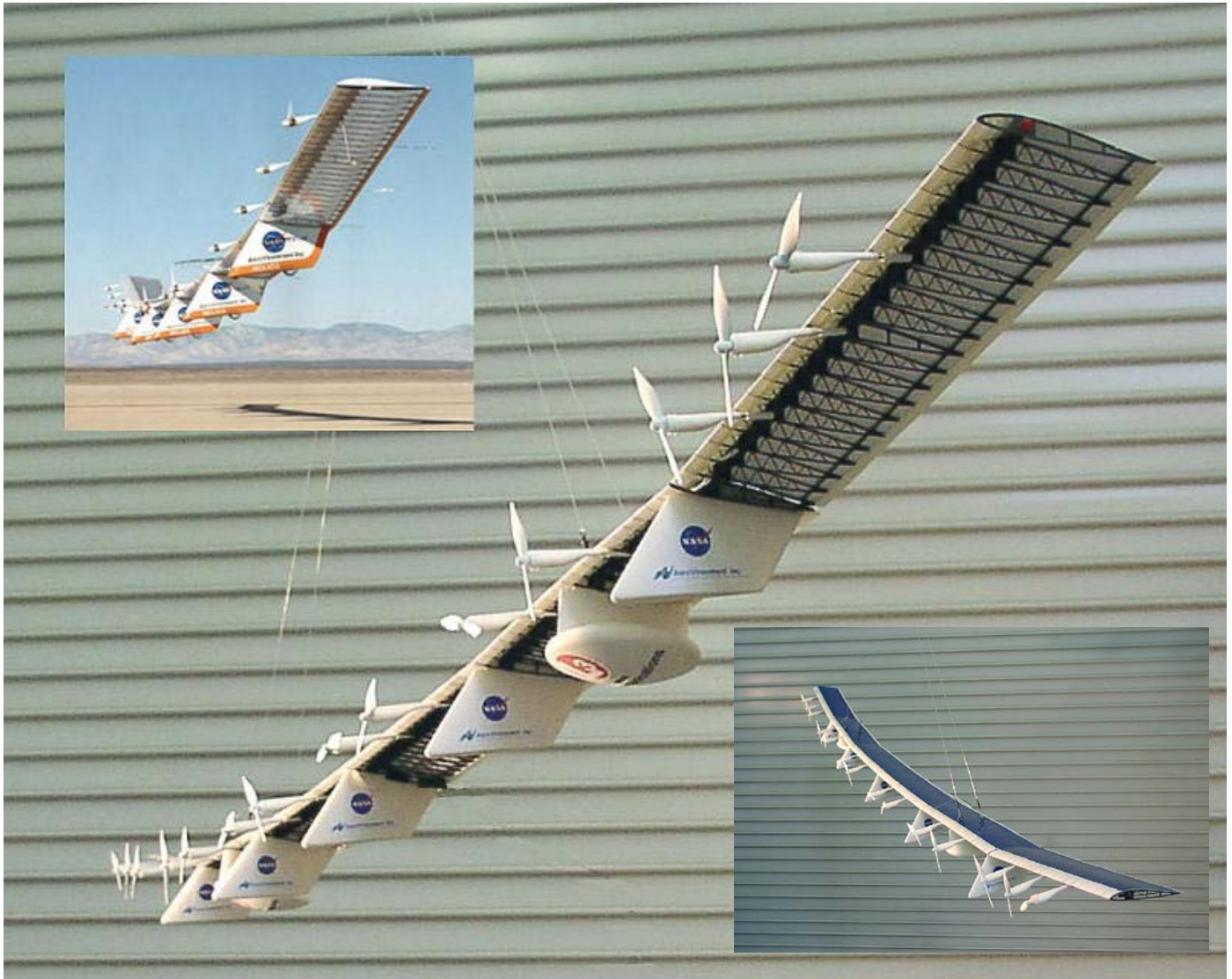




X-34 1/15th scale display model

A high-fidelity model of Orbital Sciences X-34 RLV. The fiberglass model has etched panel lines and a special paint texture that shows the quilted T.P.S. layout over the entire body. These models were produced in 1/8th, 1/15th and 1/25th scales. All models were made from CNC and Stereolithography masters.





Helios 1/25th scale model 10' w.s.

This model uses etched brass and stereolithography parts and a special blue chrome paper to accurately represent the vehicle. Several of these models were made for NASA and L3 communications.





Proteus 1/15th scale model for DFRC

A combination of stereolithography and CNC parts were used to create the master tooling for these models. The model is produced using Cast urethane and fiberglass. Original CAD data was supplied by Scaled Composites.





X-15-A2 1/15th scale World Speed Record

This model was made using molds taken from the original wind tunnel model. It's in the World Speed Record configuration and has the scramjet engine mounted on the lower tail. This model is currently on display at the Edwards AFB Museum.

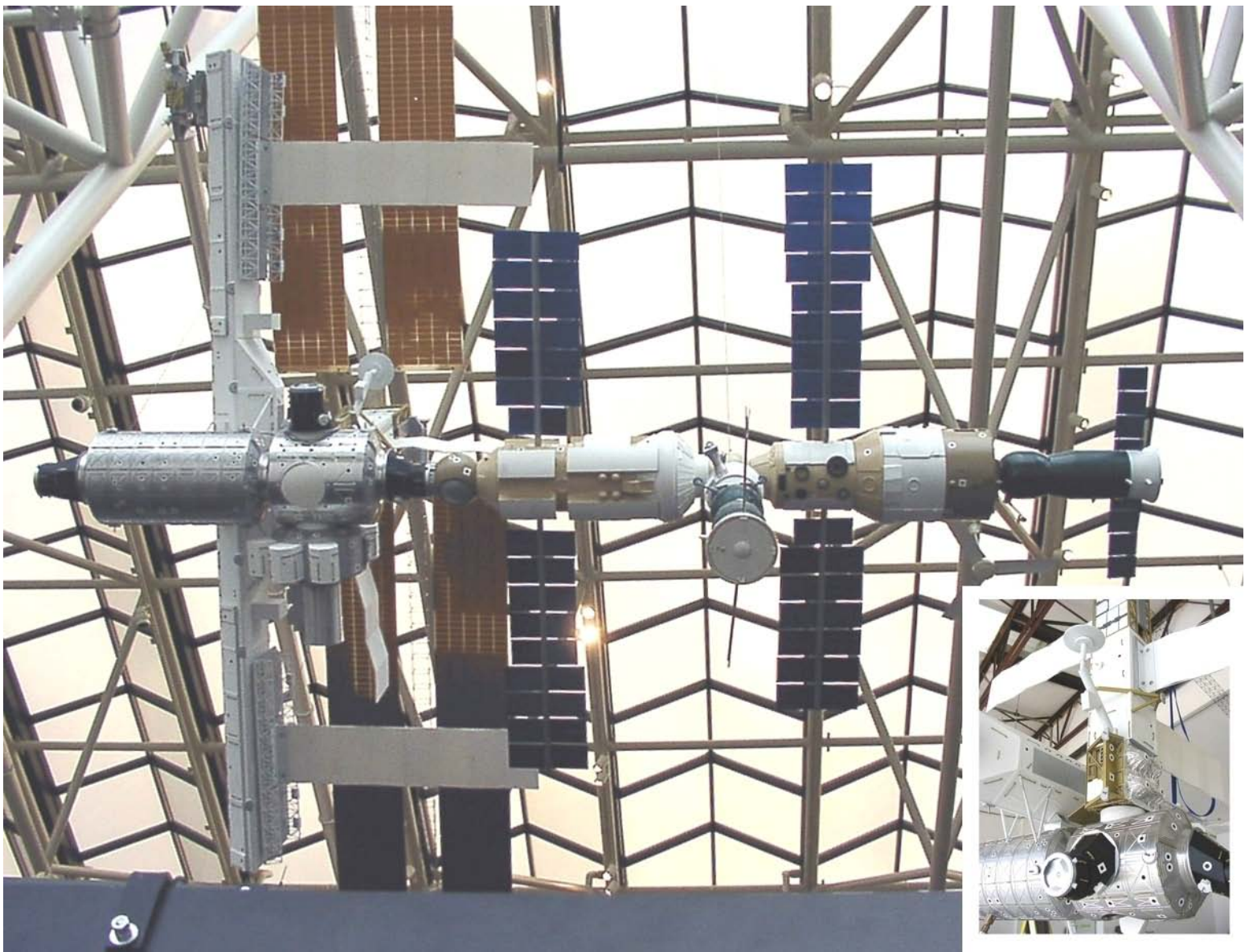


Retro Rocket coffee table inhouse design



Sputnik 1 full scale all aluminum model

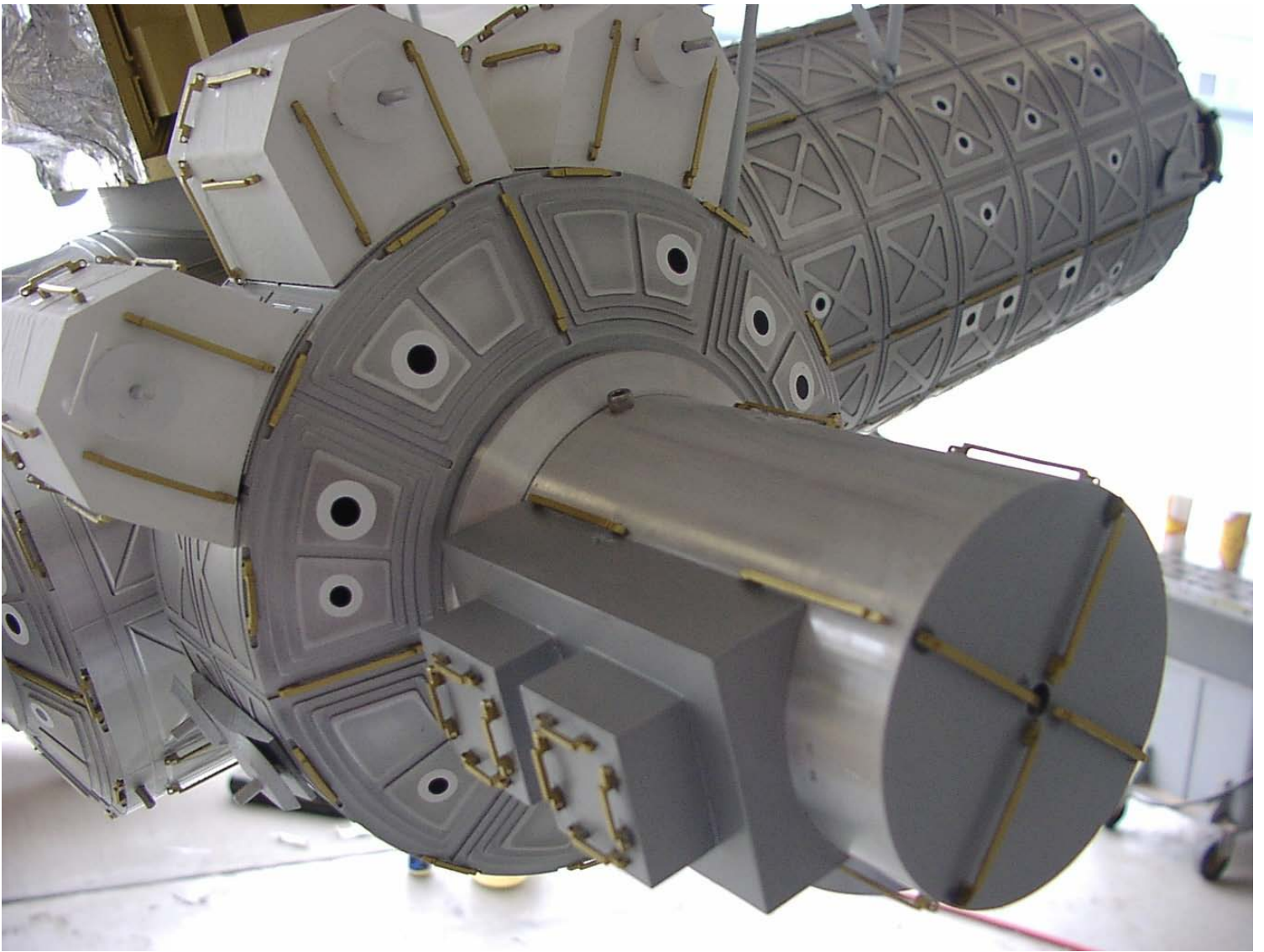




International Space Station @ NASM

This is a 1/25th scale model of the ISS made for NASA HQ and is currently on display in the Space Gallery of the National Air and Space Museum. It represents the configuration as flown when the model was delivered, it will be updated periodically to match its construction. Some basic CAD data was supplied by Boeing, but the majority of the CAD data was done inhouse thru extensive research. All parts are CNC milled aluminum or stereolithography parts.

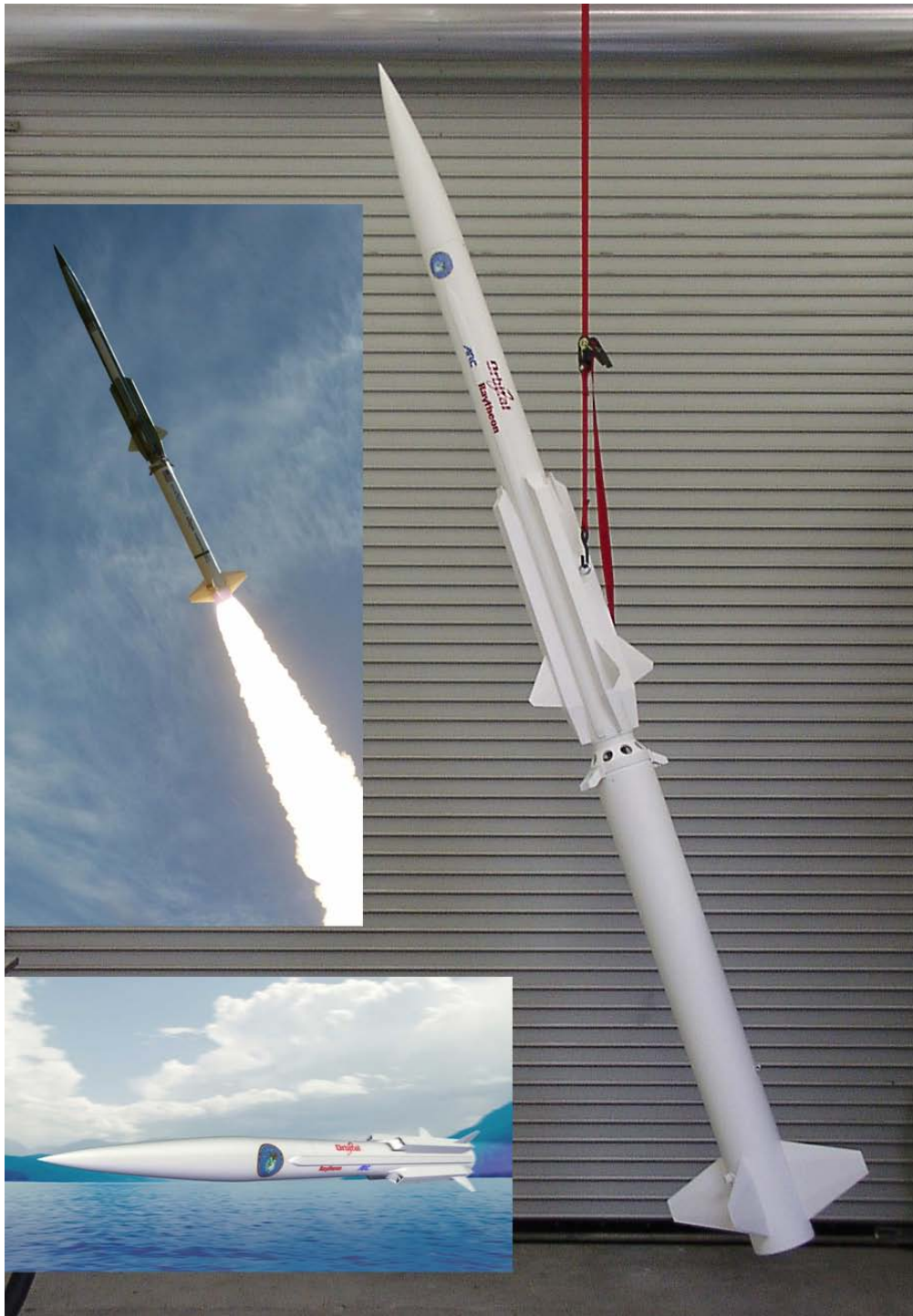




ISS 1/25th model close-up detail shot

This is a close up shot showing the fine details on the ISS model. The modules are CNC'd aluminum and the smaller parts are stereolithography parts.





Supersonic Sea Skimming Target (SSST)

SSST 1/3rd scale model made using a.b.s .tubing, cast urethane and stereolithography parts from supplied CAD data.





X-43A 1/12th scale for Hyper-X program

These are desktop models produced for the Hyper-X program and are cast urethane . Each model has the bolt hole details hand drilled after painting. The horizontal stabilizers are moveable. The models are 12" in length. The mach 10 models have a black carbon-carbon leading edge on the verticals.





X-43A 1/3rd scale for NASA

4' long fiberglass model produced from molds using CNC' foam masters. The X-43A models are produced in 1/3rd, 1/4, 1/12th, 1/32nd and 1/72nd scale models. These models go well with the Pegasus booster.

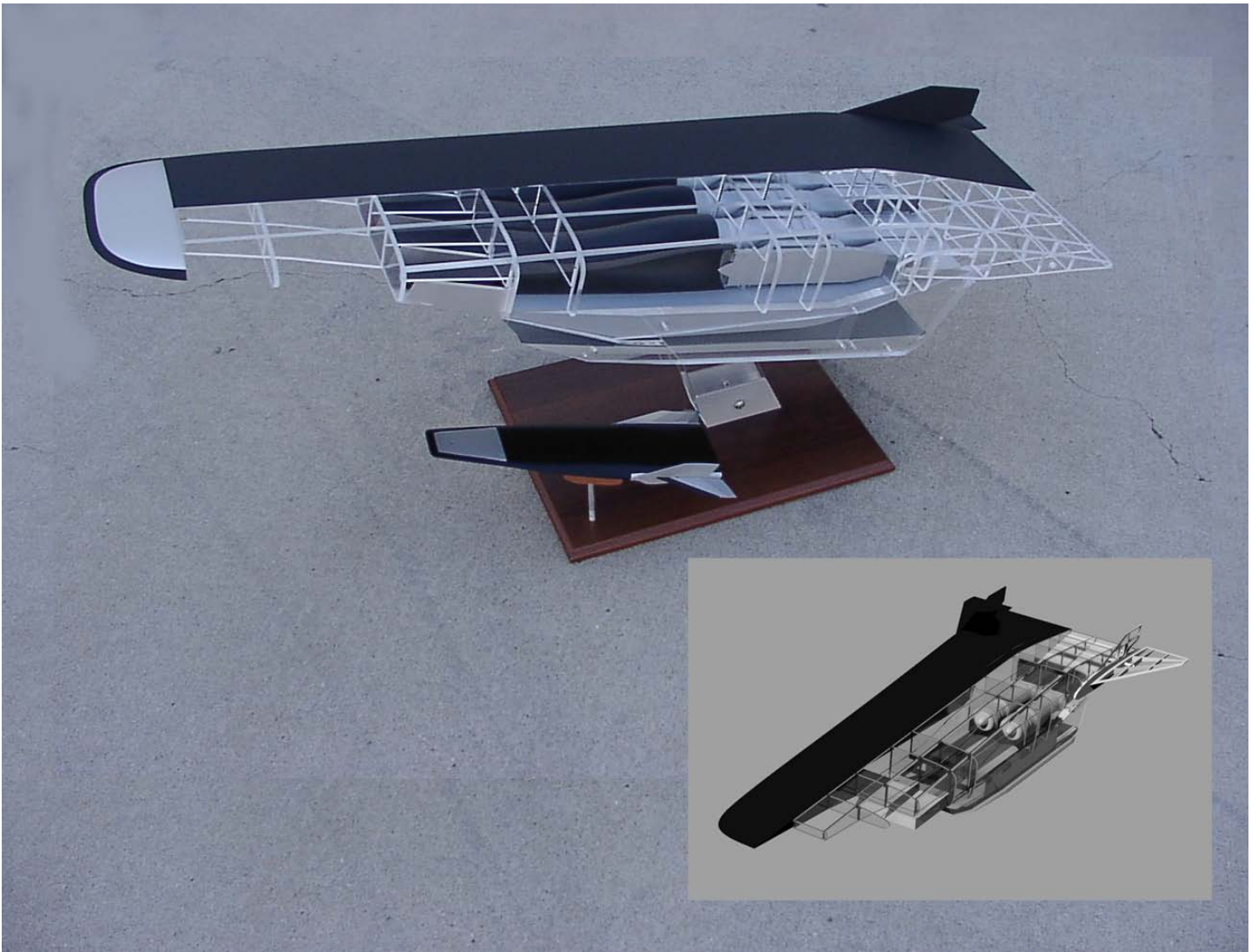




X-43B-RBCC 1/4 scale for Hyper-X program

Built for the Hyper-X program, the X-43B (Rocket Based Combined Cycle) model is constructed out of CNC'd high density foam covered with fiberglass, honeycomb panels and aluminum.





X-43B-TBCC 1/12th scale cutaway model for NASA

One of two cutaway models built for NASA GRC. The model shows the interior structure and engines and intakes. Both intake and exhaust ramps are moveable. The CAD model and rendering was done inhouse. The model uses mirrored acrylic in the middle of the body to reflect the structure and engines so the starboard side appears to have the internal details.





X-43C full scale model for Hyper-X program

One of two full scale models built for the Hyper-X program office. Built out of CNC'd foam, 1/2" thick honeycomb panels, sheet aluminum and wood. Comes with an adjustable speed rail stand and shipping crate. Pictured above is the X-43 set that includes the A and C models at 1/24th scale and the B models at 1/32nd scale. The single X-43A shows the later stand design. Desk models are cast urethane and used stereolithography masters.





X-43A/Pegasus stack model for NASA

A 1/4 scale model built for NASA for the DFRC program office. The model is built using Fiberglass and cast urethane for the detail parts. The X-43 is removeable.





B-52B "Mothership" w/ X-43A/Pegasus for DFRC

A 1/32nd scale fiberglass model with stereolithography detail parts. The tooling masters were CNC'd from Renshape and billet aluminum. Also shown is one of the 1/72nd scale B-52B/X-43A/Pegasus model made using cast urethane. Both models feature removable X-43/Pegasus models.

