SPARK (Spaceborne Payload Assist Rocket - Kauai or Super Strypi)

First rocket launched from the state of Hawaii.

An American expendable launch system developed by the University of Hawaii, Sandia and Aerojet Rocketdyne. Designed to place miniaturized satellites into low Earth and sun-synchronous orbits, it is a derivative of the Strypi rocket which was developed in the 1960s in support of nuclear weapons testing.

Standing at 67 feet tall and measuring 5 feet in diameter, SPARK is designed as a three-stage all-solid carrier rocket, with a spin-stabilized first stage known as LEO-46 and an active attitude control system on the second and third stages.
It is launched using a new rail-guided system. It is expected to have a payload capacity of 250 kilograms (550 lb) to a Sun-synchronous orbit at an altitude of approximately 400 kilometres (250 mi). Launches will be conducted from the Pacific Missile Range Facility at Barking Sands.

The first launch of SPARK, named ORS-4, took place on November 3, 2015 and was carrying HiakaSat (formerly called HawaiiSat-1) and several secondary payloads, including the Edison Demonstration of Smallsat Networks. The mission was supposed to test the rocket at its full payload capacity. However, telemetry showed the rocket tumbling soon after liftoff, and the U.S. Air Force released a statement, saying that the "experimental Super Strypi launch vehicle failed in mid-flight shortly after liftoff".

SPARK is designed to fulfill the requirements for short-notice launch readiness to fly Operationally Responsive Space Office missions.

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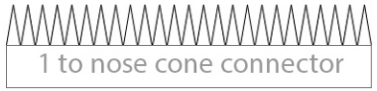
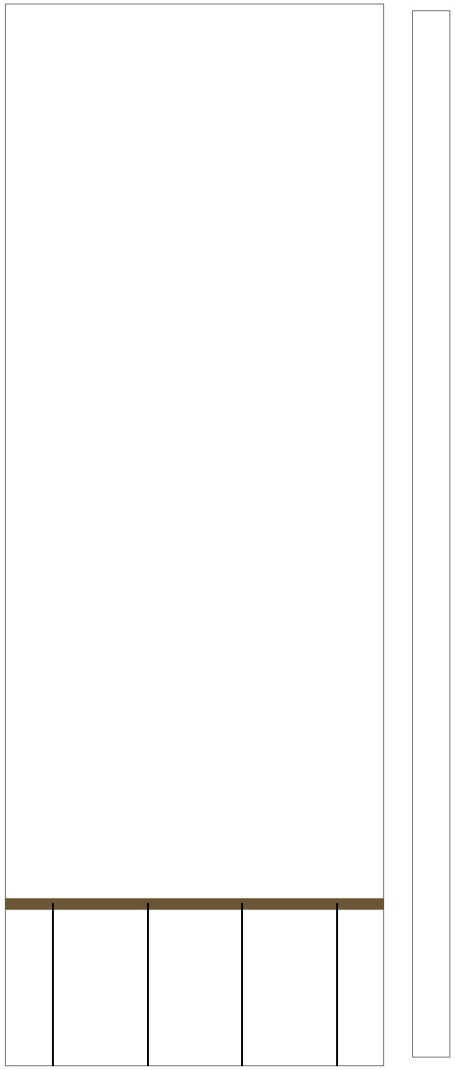
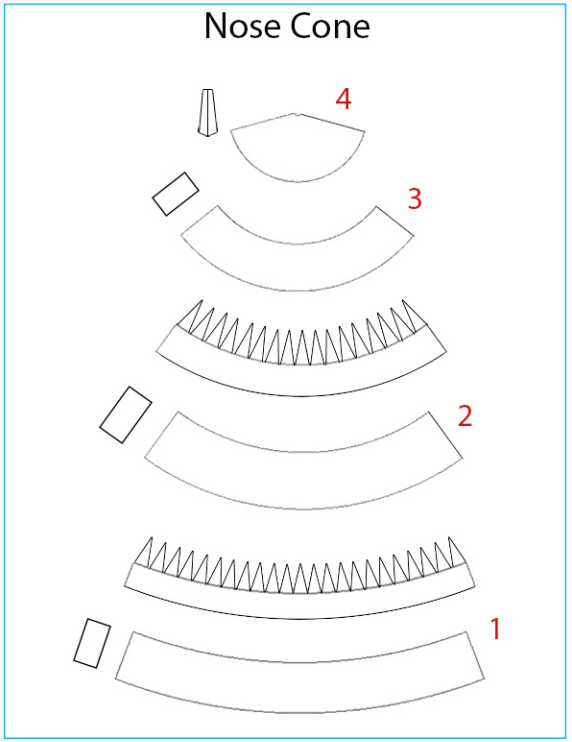


1

2

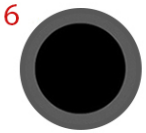


4

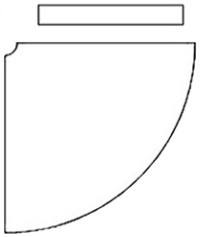


Formers, glue to cardstock for strength

6

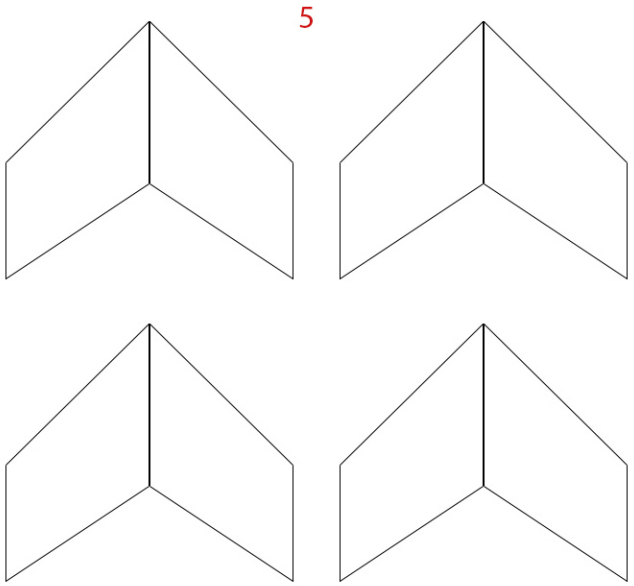


7



Color backside of 7 grey. Roll 7 to a cone. Cut out the black circle from 6. Glue 7 to the backside of 6 for embedded nozzle.

5



Score-fold each fin in half and glue together.

SPARK (Spaceborne Payload Assist Rocket - Kauai or Super Strypi) 1/87 Scale paper Model

Zach's PaperSat Designs Spacecraft paper Models

Instructions