The Student Team

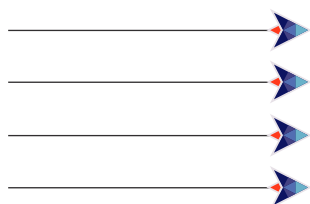Raiyaan Shaikh, Mirsub Shaikh, Syed "Muhammad" Ali, Talha Hamn

AUTOMATIC INK PRINTER DESIGNED FOR MICROGRAVITY

SCHOOL: ARIZONA VIRTUAL ACADEMY

LOCATION: GLENDALE, AZ

FLIGHT PROVIDER: BLUE ORIGIN

GRADES: HIGH SCHOOL

STUDENT EXPERIMENT DESCRIPTION

Our goal is to build and test a printer capable of functioning in microgravity. Using a method similar to that used in dot-matrix printers, a gradient will be printed into the paper fading from black to white. The actual design uses three printheads attached to a custom-built unidimensional CNC plotter. The stepper motor, solenoid valves, and CNC plotter motor will be controlled with an Arduino microcontroller. The CNC plotter moves the printhead and the roller rolls the paper against it.