



MEASURING FLUX OF MUONS IN COSMIC RAYS AT VERY HIGH ALTITUDES



SCHOOL: LOUISVILLE MALE HIGH SCHOOL

LOCATION: LOUISVILLE, KY

FLIGHT PROVIDER: AEROSTAR

GRADES: HIGH SCHOOL

STUDENT EXPERIMENT DESCRIPTION

Cosmic muons can be used to build noninvasive detectors capable of 3-D imaging the inside of solid structures. Our experiment aims to measure the number of muons passing through a unit area per second at ground level and at 70,000 ft, where rates are expected to be much higher. We will build a plastic scintillator-based muon detector: a muon passing through it will create a flash of light that will be amplified by a Silicon PhotoMultiplier into a measurable electric pulse that will be recorded.