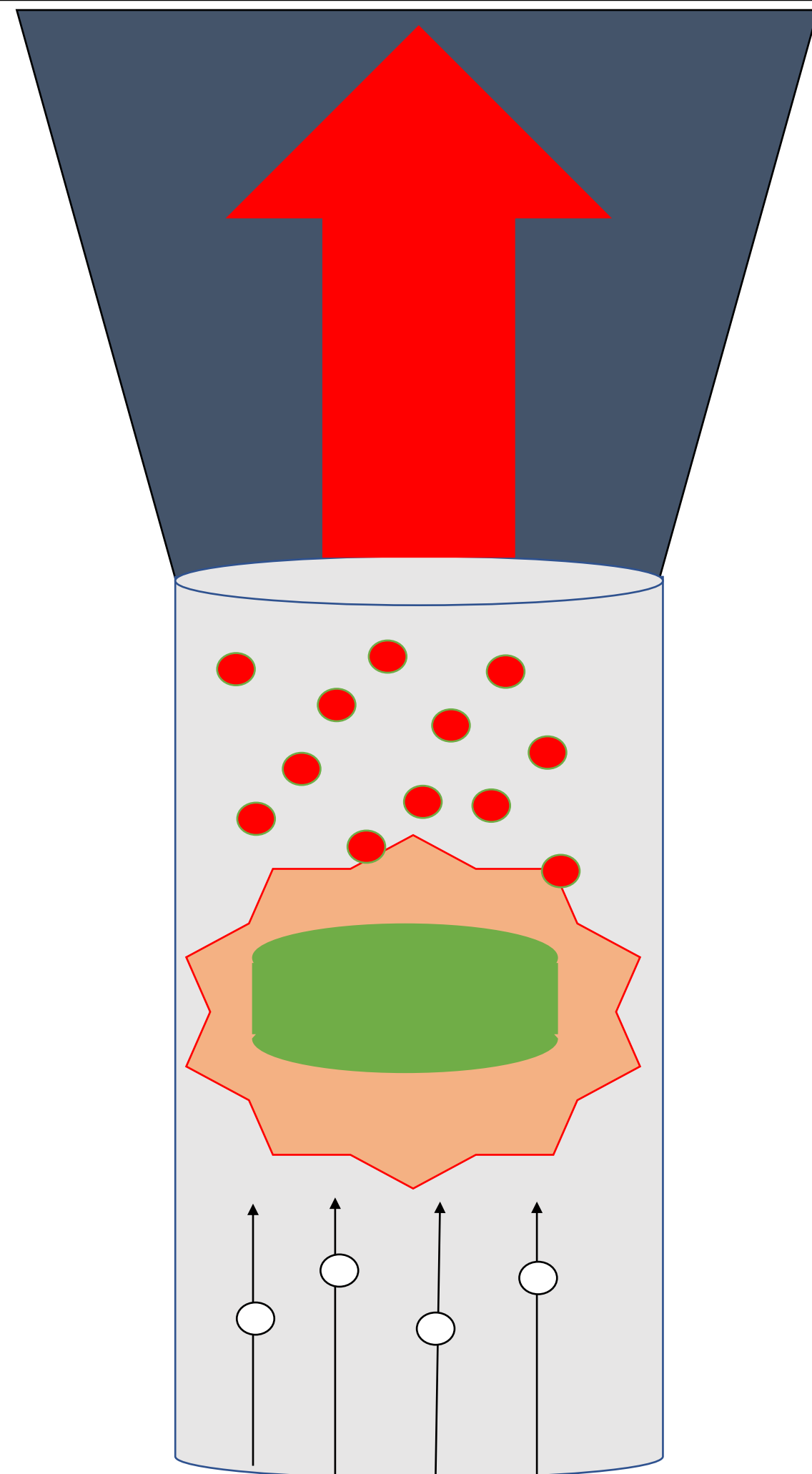


Background

- NASA wants to send manned missions to Mars.
- Further research into Nuclear Thermal Propulsion engines could allow for faster and more efficient space travel.

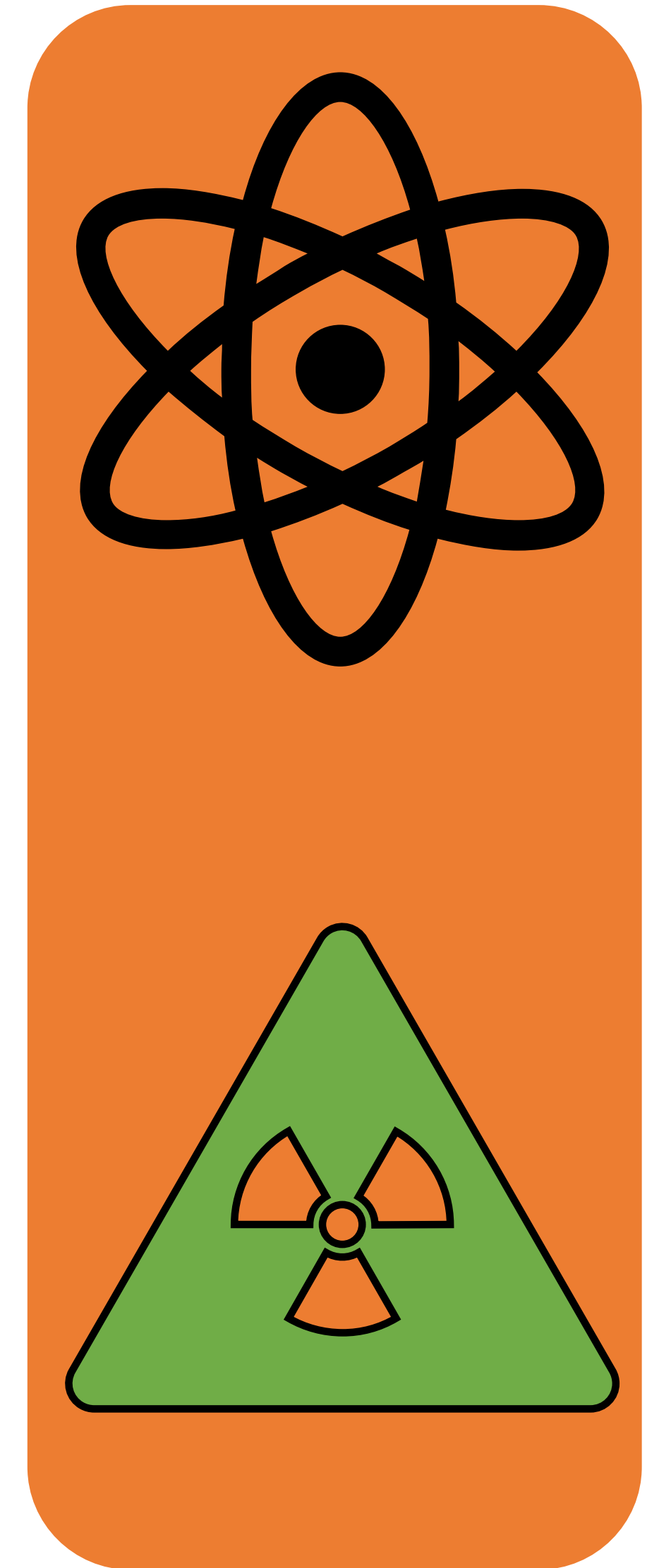
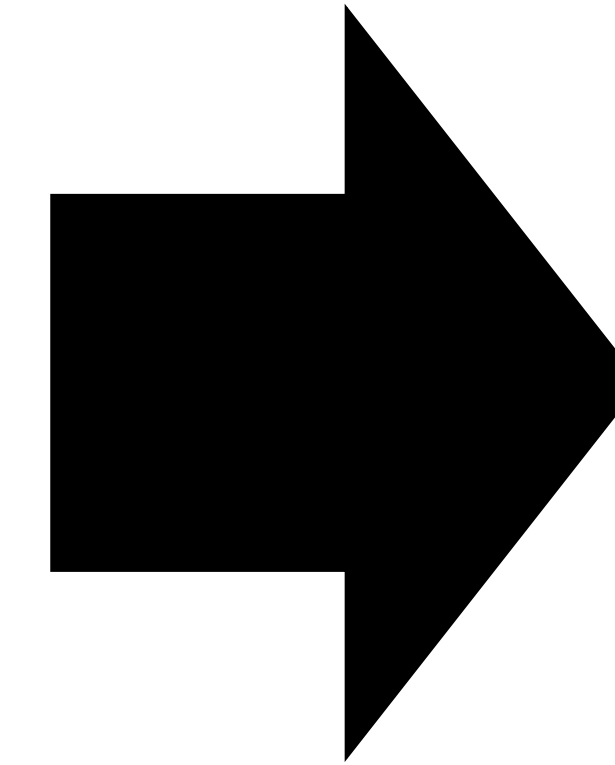
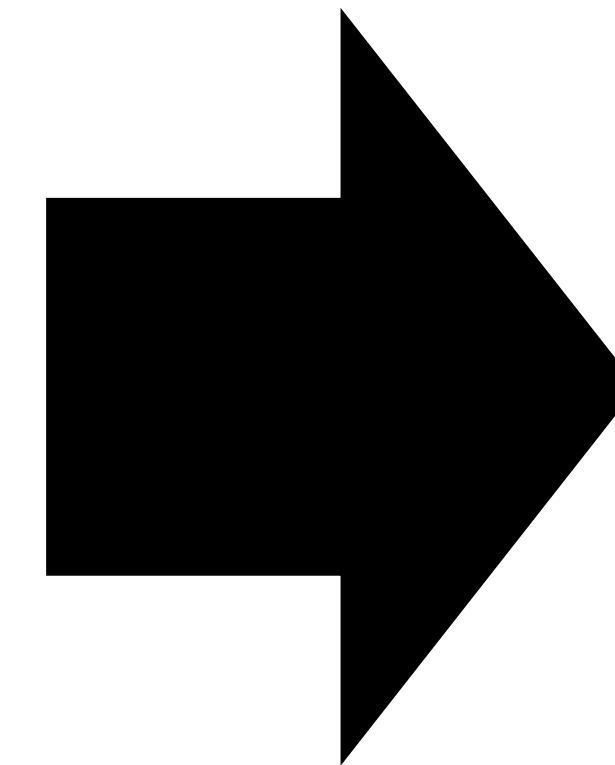
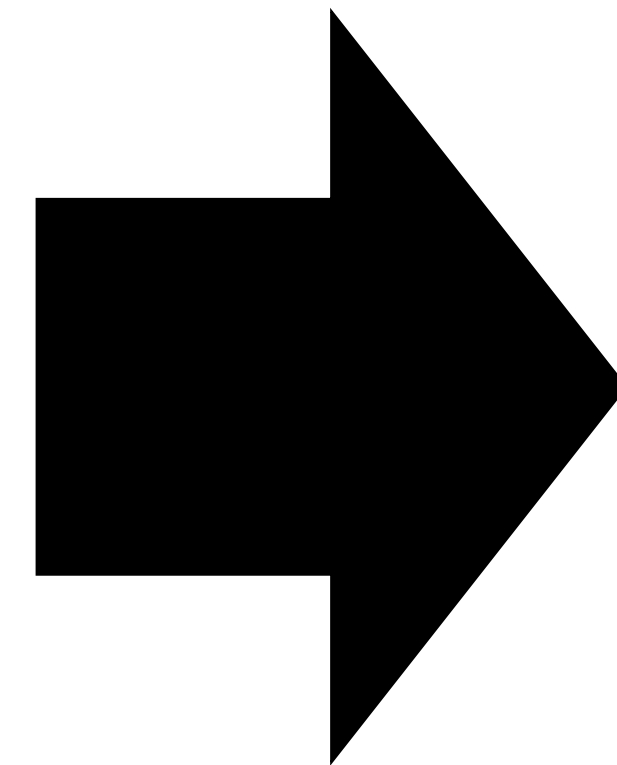
Nuclear Thermal Propulsion

- Hydrogen is heated directly by a nuclear accelerated through a nozzle.
- The thrust is directly related to the thermal power of the reactor.



Objective

The objective of the project is to develop and test a canister to go into Big BUSTER to test nuclear fuel compounds for thermal nuclear propulsion systems in the Transient Reactor (TREAT).



Our Canister

- Our canister will be created out of tungsten with a zirconium carbide coating.
- Our canister uses straight pathed channels to bring hydrogen in contact with the nuclear fuel.

SIRIUS Module

Big BUSTER

TREAT Reactor

The TREAT Reactor is a transient reactor that will be used to test different types of nuclear fuels.