

FAST. Fresnel-Assisted Sintering Technology

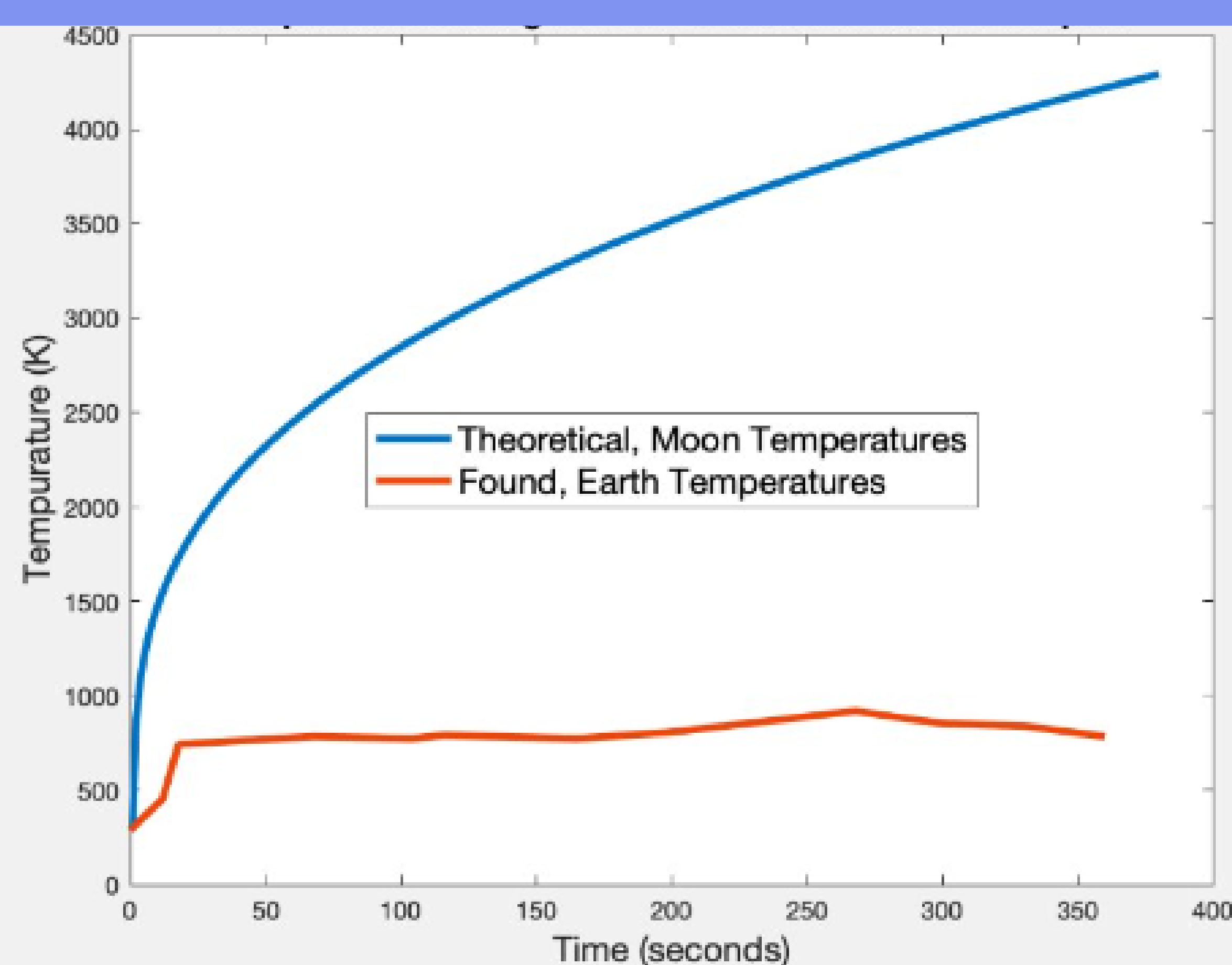
Goal

Mitigate the impacts of lunar Plume Surface Interaction.

Solution

Manufacturing of bricks from a polycarbonate Fresnel Lens system by sintering lunar regolith and arranging into a landing pad.

Heat Transfer Analysis



Temperature Calculations vs Test Results

System Highlights



Low Power Consumption



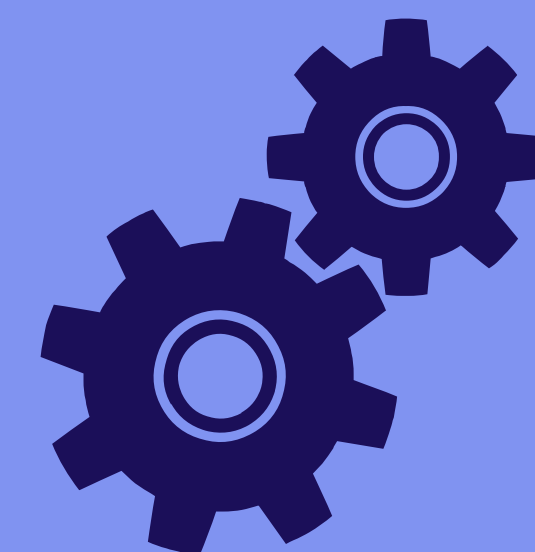
Sustainable



Utilizes In-Situ Resources



Low Cost

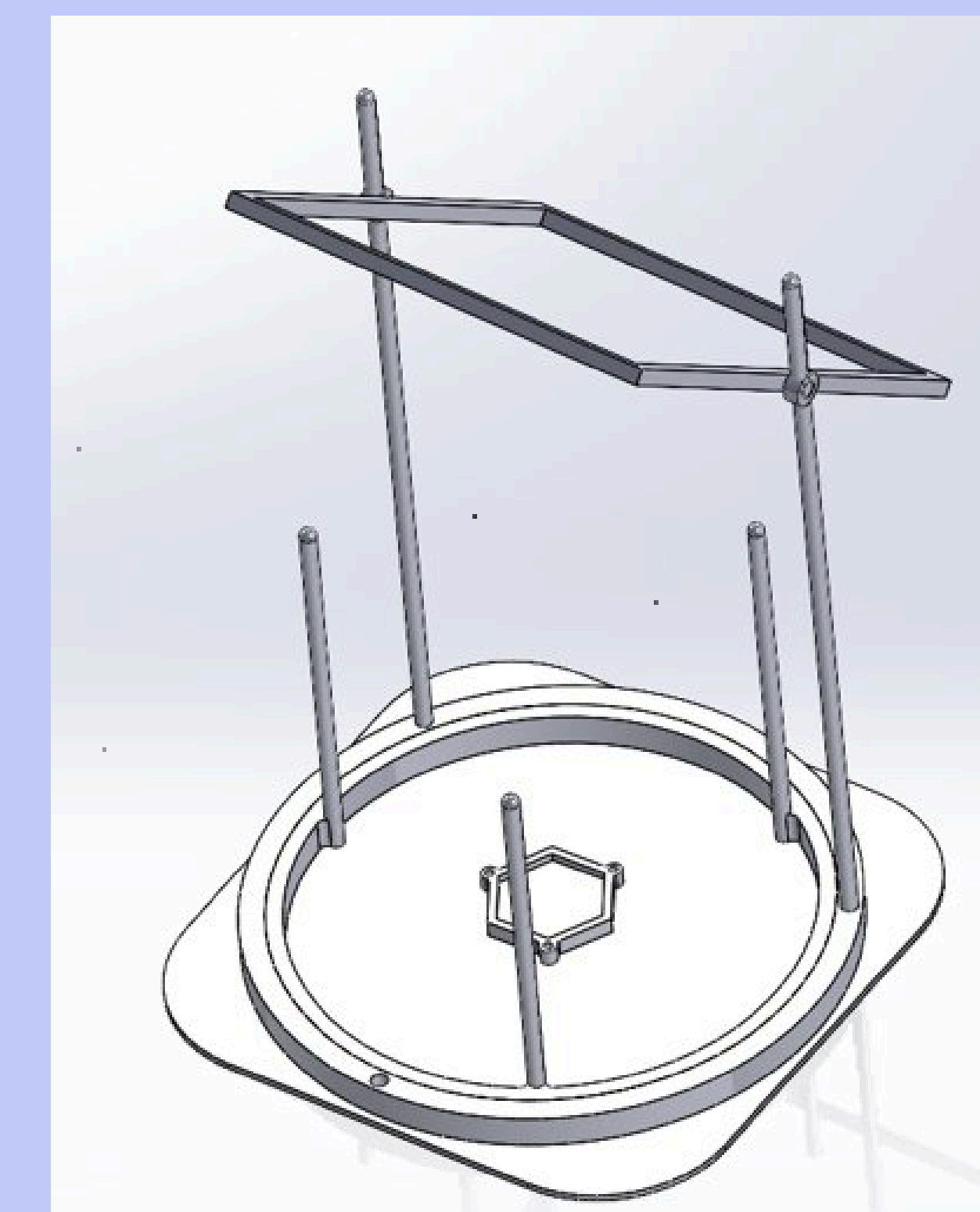


Autonomous

Results

Focusing solar energy with a Fresnel Lens can **successfully melt lunar regolith simulant.**

Prototype & Testing



COLORADO SCHOOL OF
MINES