

## **UC Irvine**

### **SSOE Research Symposium Dean's Awards**

#### **Title**

UCI Rocket Project

#### **Permalink**

<https://escholarship.org/uc/item/00f048q0>

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#### **Publication Date**

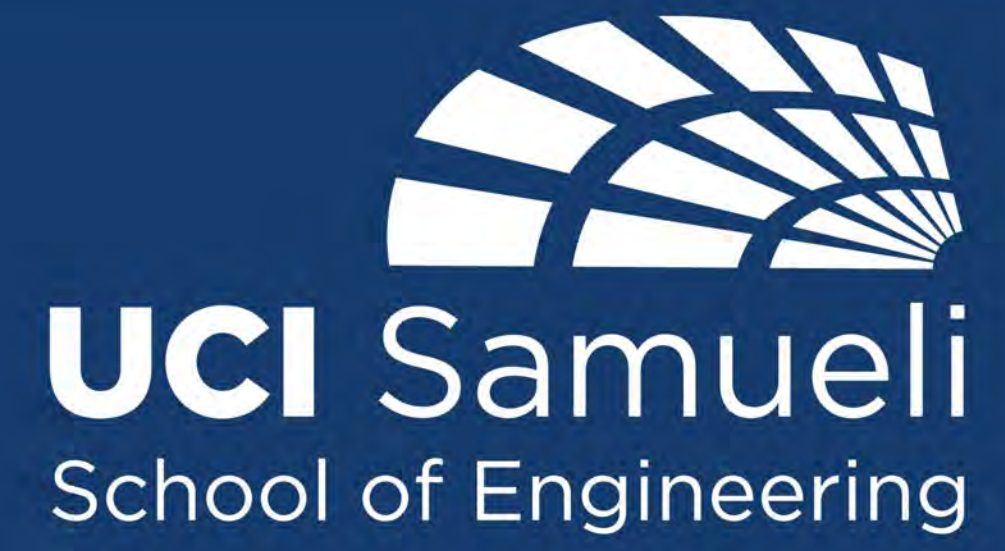
2019-03-15

Peer reviewed



# Rocket Project

Advisors: Professor Mark Walter & Professor Ken Mease



## BACKGROUND

- First liquid propellant rocket at UC Irvine
- Preparing engineers for aerospace industry

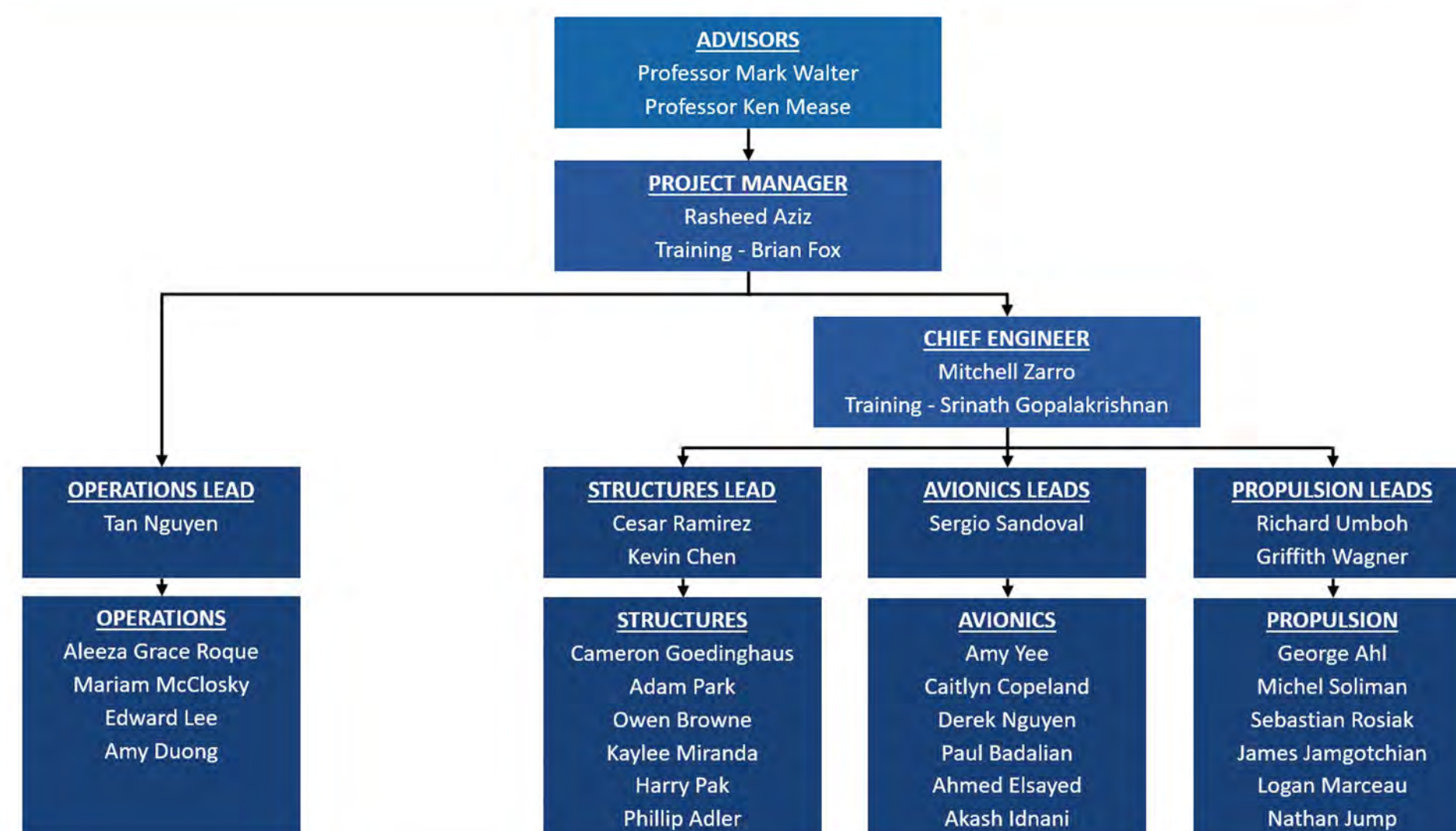
## GOALS

- Conduct successful static test fire
- Win the Base 11 Space Challenge by being the first university to launch a liquid fueled rocket to the Karman Line

## OBJECTIVES

- Engine Design Thrust: 1300 lbs
- Test Stand with Data Collection System and Safety Features
- Base 11 Rocket Altitude: 100 km
- Dynamic Flight Control System
- Single Stage Liquid Engine Design
- Lightweight Rocket Structure

## TEAM STRUCTURE



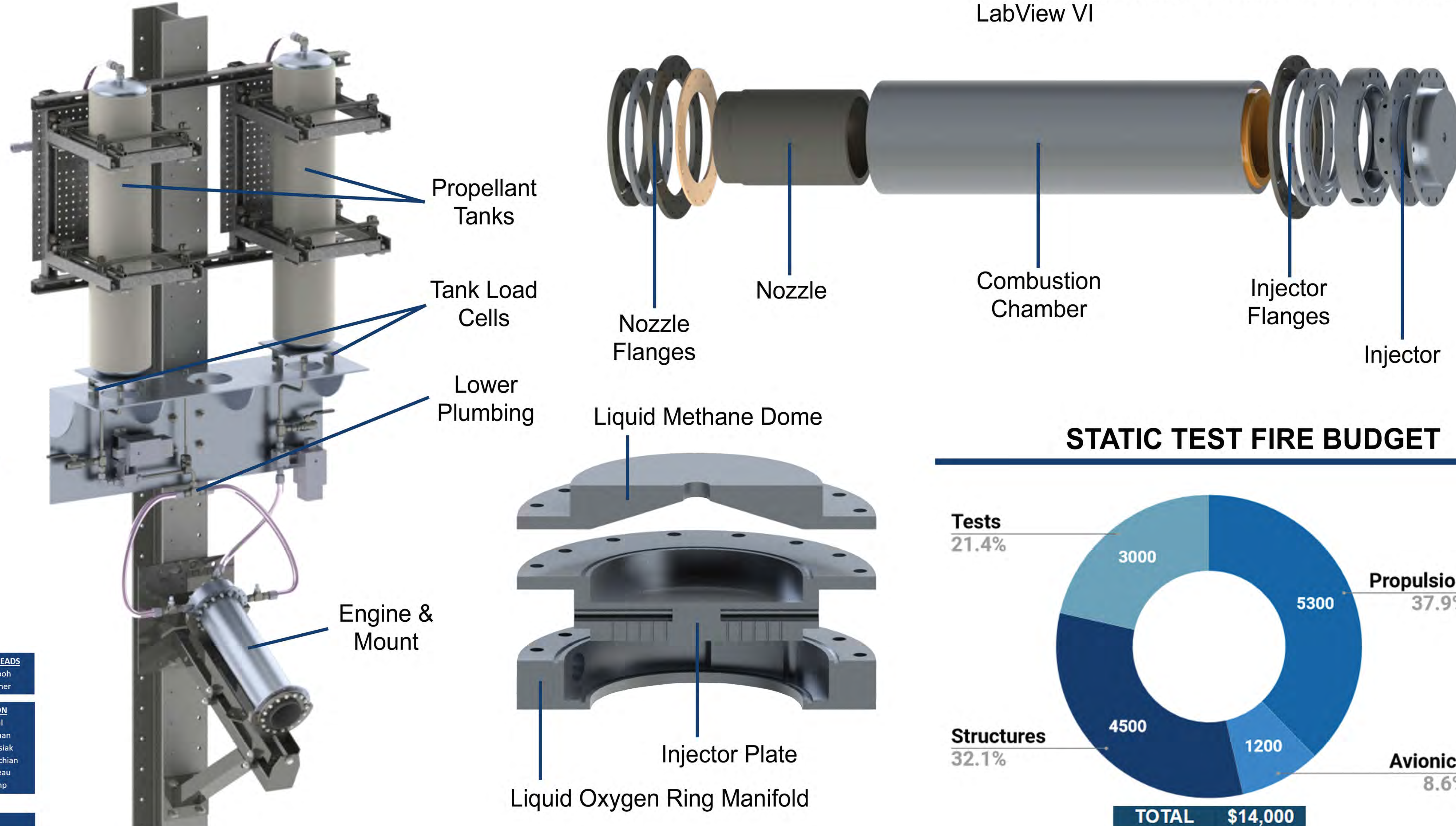
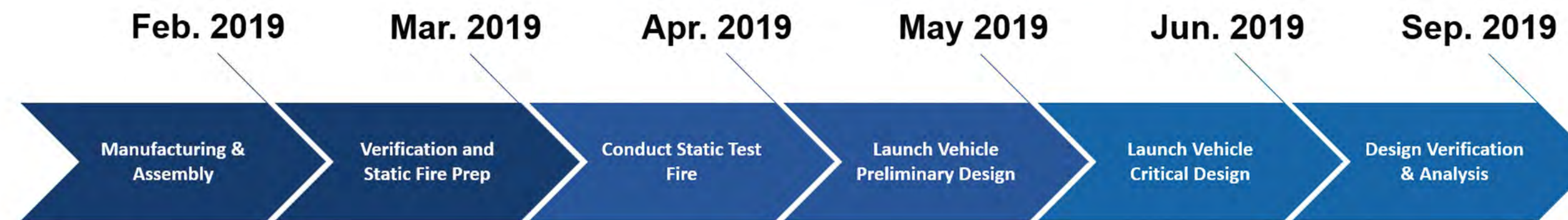
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## PROGRESS

- Completed test stand, plumbing system, and assembly procedures
- Developing plumbing leak test, system flow test, and cryogenic compatibility test procedures
- Manufacturing engine assembly and retrofitted engine mount
- Integrating sensors and actuators into central LabView VI

## TIMELINE



## STATIC TEST FIRE BUDGET

