



# Pushing the bounds of collegiate rocketry

## Overview

PSP Liquids is Purdue's liquid bi-propellant rocket team participating in the FAR-MARS competition, which challenges a collegiate team to reach 30,000 feet with a LOx/ Methane rocket. PSP Liquids has manufactured and tested their first rocket, Boomie Zoomie (BZ), and are hoping to launch in the near future. PSP Liquids is currently designing our second iteration, Boomie Zoomie B (BZB), in hopes to win the competition by 2021.

The FAR-MARS Launch Contest is an ongoing competition for collegiate rocket teams to launch a liquid bipropellant rocket to an altitude of 45,000 feet, with an additional prize for a team that manages to do so using liquid methane and oxygen as propellants. No team has been successful in reaching the altitude goal since the competition's inception in 2017.

## Breakdown

Currently, PSP Liquids has seven subteams for Boomie Zoomie B that you can be a part of:

- **Avionics**, covering vehicle electronics and control systems.
- **Business**, working on sponsorships and public relations.
- **Fluid Systems**, designing the propellant feed system.
- **Manufacturing**, focusing on the machining, assembly, and design workflow of BZB.
- **Propulsion**, designing the thrust chamber assembly.
- **Structures**, encompassing the design and integration of vehicle components.
- **Trajectory & Aerodynamics**, analyzing the flight model and developing simulations.

## AT A GLANCE

- Started in 2017
- Focusing on liquid bi-propellant rocketry
- Competing in the FAR-MARS Launch Contest
- Manufactured and tested Boomie Zoomie
- Currently working on the next iteration Boomie Zoomie B

## CONTACT

**Bryne Hunt**  
Project Manager  
hunt132@purdue.edu  
[purdueseds.space/liquids](http://purdueseds.space/liquids)

