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Air Force Research Laboratory Selects P3 Technologies Phase II SBIR Proposal for Award

The Air Force Research Laboratory (AFRL) Rocket Lab at Edwards Air Force Base, California has selected a Phase II Small Business Innovation Research (SBIR) proposal from P3 Technologies for award. The selected effort continues development of an advanced technology interpropellant shaft seal solution for advanced upper stage propulsion systems. P3 Technologies seal design was not possible prior to the availability of additive manufacturing.

In the Phase I effort, P3 Technologies conducted design optimization, analysis, fabrication, and test of the proof-of-concept seal design. The novel seal demonstrated improved leakage control, reduced flow rates, and enables configurations that can be packaged in reduced axial spacing for an overall reduction in turbopump size and weight. The seal has additional applications throughout the turbopump, as well as applications relevant to the commercial turbine engine, compressor, and pump markets.