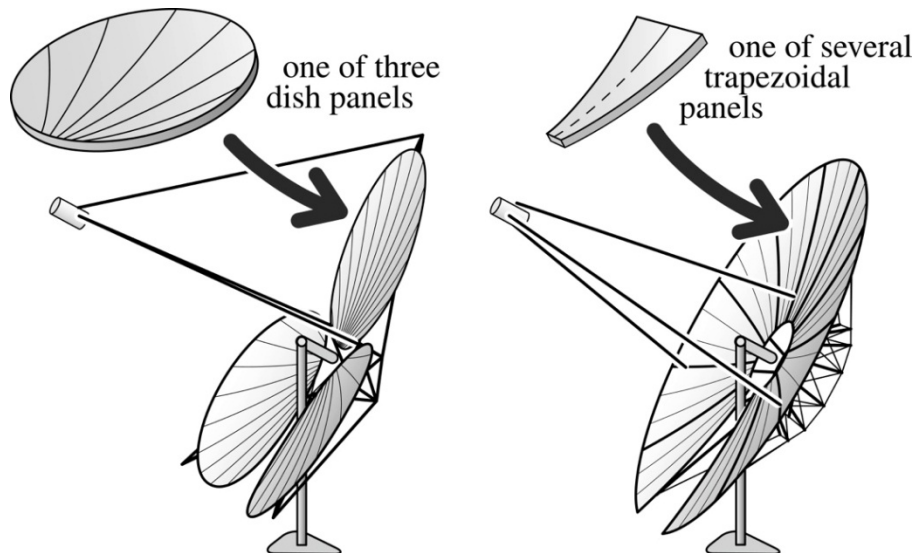


Technology Summary

- Project leverages extensive space experience by JPL and L'Garde to develop a low-cost parabolic dish capable of providing 4 kW thermal. Key features:
 - Metallized reflective thin film material with high reflectivity (>93%) with polyurethane foam backing
 - Single mold polyurethane backing fabrication enables low cost high production manufacturing
 - Ease of panel installation and removal enables repairs and results in a low total life cycle cost
 - Deployment of multiple dishes enhances system level optimizations by simulating larger fields which addresses issues like shared resources



Key Personnel

Dr. Art Palisoc, L'Garde
 Bill Nesmith, JPL
 Dr. Andrew Kindler, JPL

Program Summary

Federal funds: \$ 2.343M
 Cost-share: \$ 565K
 Total budget: \$ 2.908M
 Period of performance: 36 months

	Key Milestones & Deliverables
Year 1	<ul style="list-style-type: none"> Material selection & fab processes validated System trades to optimize overall system
Year 2	<ul style="list-style-type: none"> Facet and back support development Mechanical detailed design
Year 3	<ul style="list-style-type: none"> Integrate 4 kW thermal dish concentrator Validation testing

Technology Impact

Current concentrators can cost as much as 40-50% of the total installed costs for a CSP plant. In order to reduce the costs from current \$200-\$250/m², it is important to focus on the overall system. The reflector surface is a key cost driver, and our film-based reflector will help significantly in achieving DOE's cost target of \$75/m². The ease of manufacturability, installation and replacement make this technology a compelling one to develop. The technology can be easily modified for other CSP options such as heliostats and parabolic troughs.

Thin Film mirror is ~40-50% cheaper and 60% lighter than SOA