

Satellite Cooling Loop with Radiator

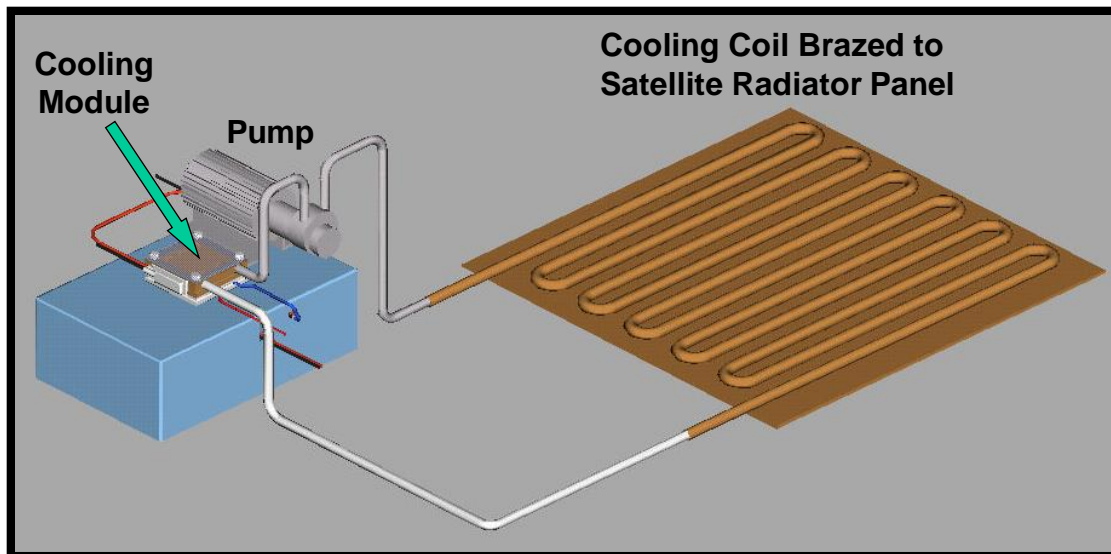
Project: Heat Dissipation from Satellite Electronic Device to Radiator Panel using Thermoelectric Cooler and Enhanced Single-Phase Liquid Cooling

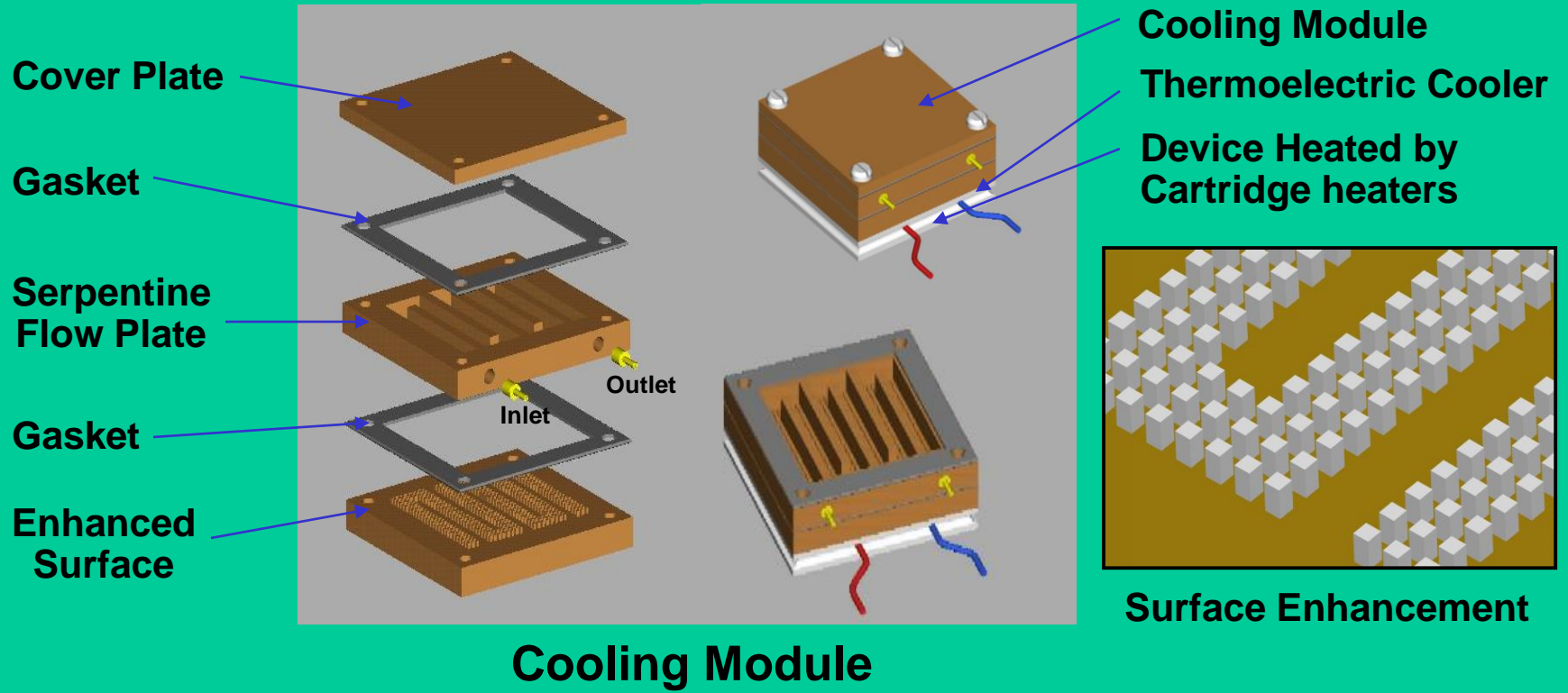
Team (left to right): Mike Prewitt, Farid Fadzil, Laura Kennedy, John Kleihege, and Blake Barnes



Key Findings:

- Prototype able to maintain test heater temperatures below 0°C at heat inputs up to 30 W
- Larger radiator needed to achieve desired test results at room temperature
- During peak performance system uses 116.75 W while dissipating 50 W





Thermoelectric cooler characteristics:

- Max temperature of 75 ° C
- Max heat dissipation of 125 W at 6.0 A and 18 VDC
- Pump flow rate (using ethylene glycol): 44 ml/s

