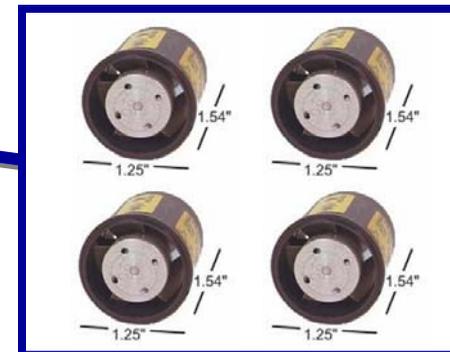
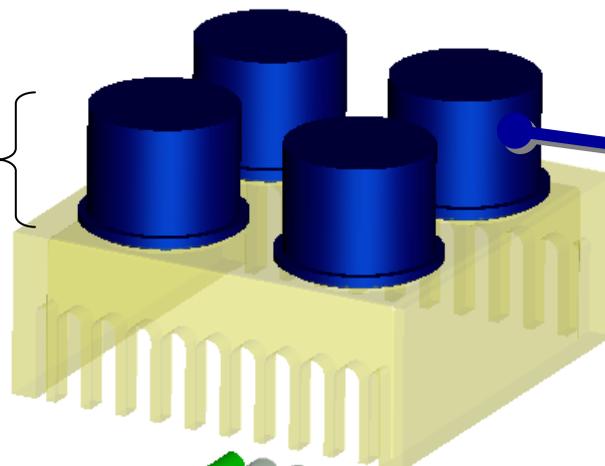


# Raytheon Integrated Microchannel and Jet-Impingement Cooler (IMJC) for MACE

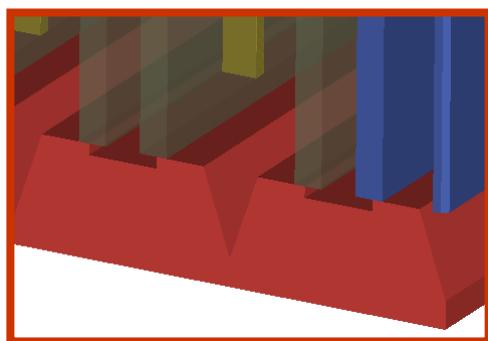
*"MEMS Enabled Air Mover (MEAM)"*

**Other collaborators  
TBD**

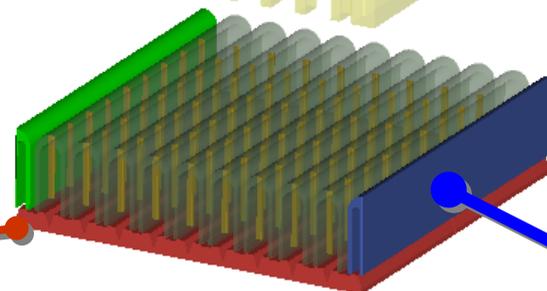
Advanced Implementation:  
MEAM replaces conventional fan array to further improve efficiency and/or reliability



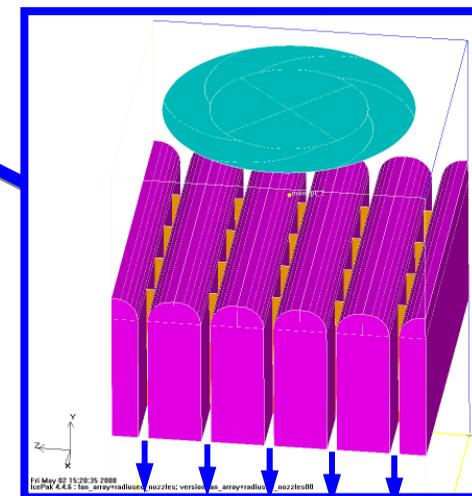
Conventional (Baseline):  
Small Fan Array Providing 50 CFM at 33 W or Less Total Power



Novel microchannel core architecture optimized for parallel jet impingement



- Program Goals
- 1000 watts heat rejection
  - 0.05 C/W performance
  - 33 W blower power
  - 4 in x 4 in x 4 in volume
  - 800 g heat sink + blower mass



Optimized jet impingement nozzle array and manifold architecture