AFRL High Heat Flux Testbed

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Background

As technology continues to develop, electronic components continue to produce higher power densities. This becomes a present challenge that needs to be dealt with. New cooling solutions needs to be devised and to test these solutions a dedicated test bed is a necessity which is why we are making the high heat flux testbed.

Goals & Objective

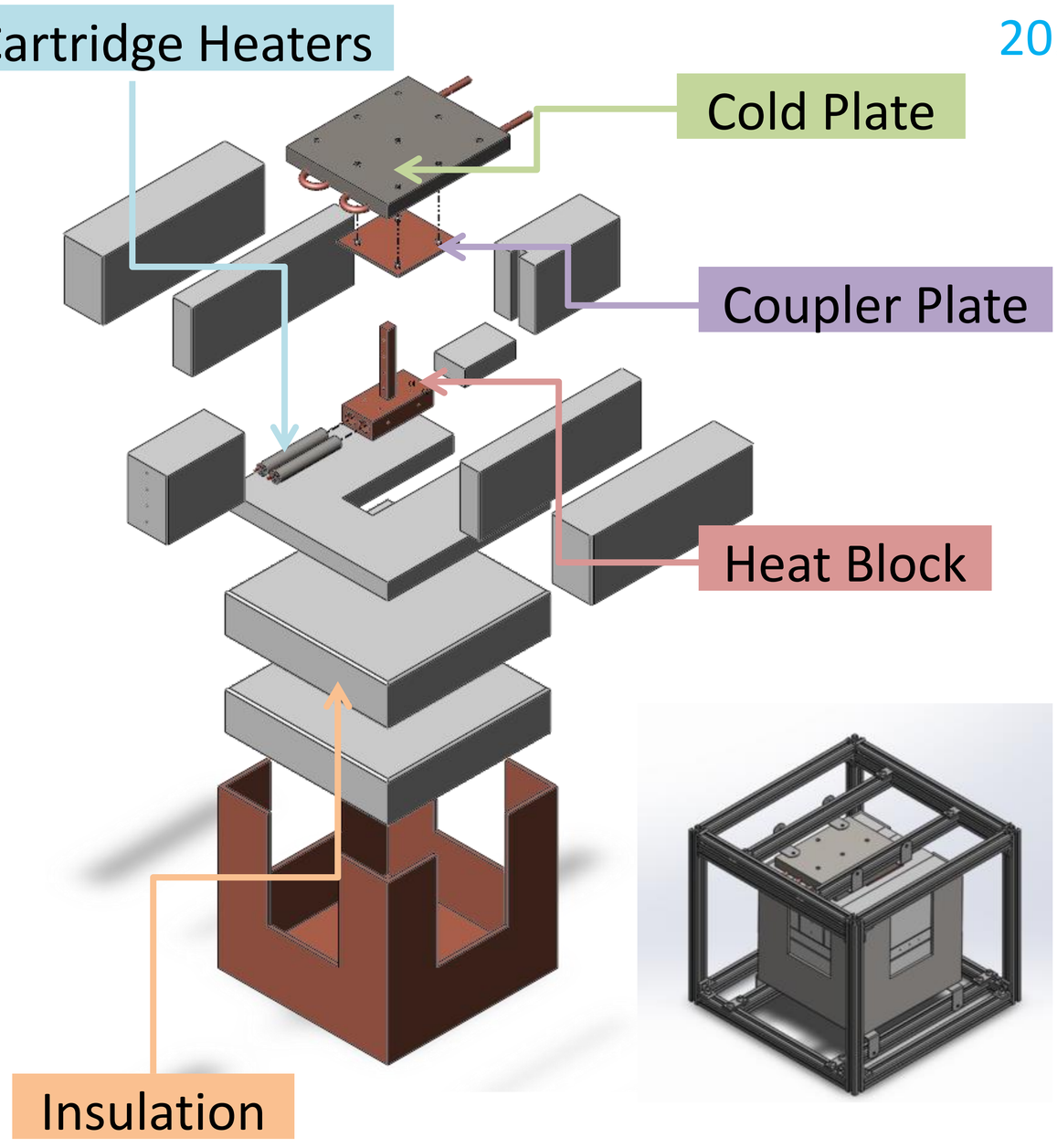
Objective 1 – *design, develop, and construct a testbed capable of producing and dissipating high heat fluxes/loads.*

The goal is to create a flux of 500-2000 W/cm^2 and have the flux concentrate onto a small area of 1 cm^2. The cooling system will then dissipate the heat and allow the system to maintain safe temperatures; in particular, the concentrated area will be kept at room temperature.

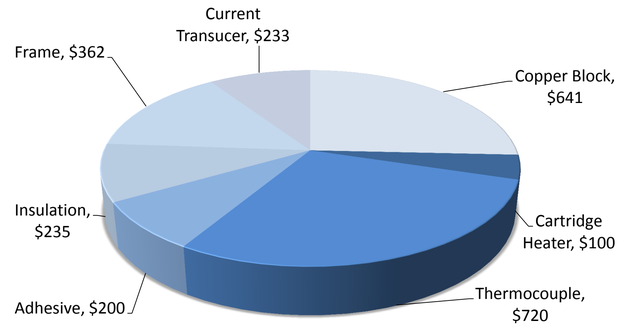
Objective 2- Create Test Plan and perform test sequence for data

Specifications

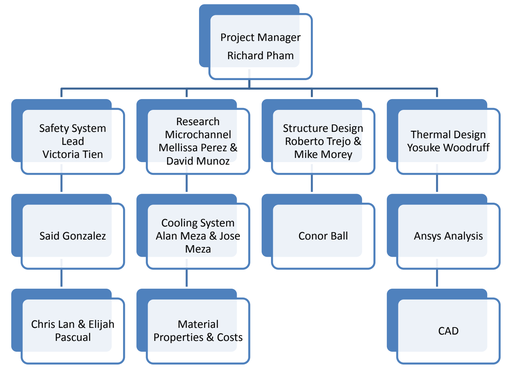
- Vacuum compatible components
- Produce 2000 W/cm^2
- Implement Safety Shutdown System
- Insulate entire system
- Heating area 1 cm^2



2015-2016 Budget & Spending



Team Structure



Team Members

Richard Pham	Chris Lan	Roberto Trejo
Victoria Tien	Conor Ball	Mike Morey
Wesley Dodge	Alan Meza	Elijah Pascual
David Munoz	Jose Meza	Said Gonzalez
Melissa Perez	Yosuke Woodruff	

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