

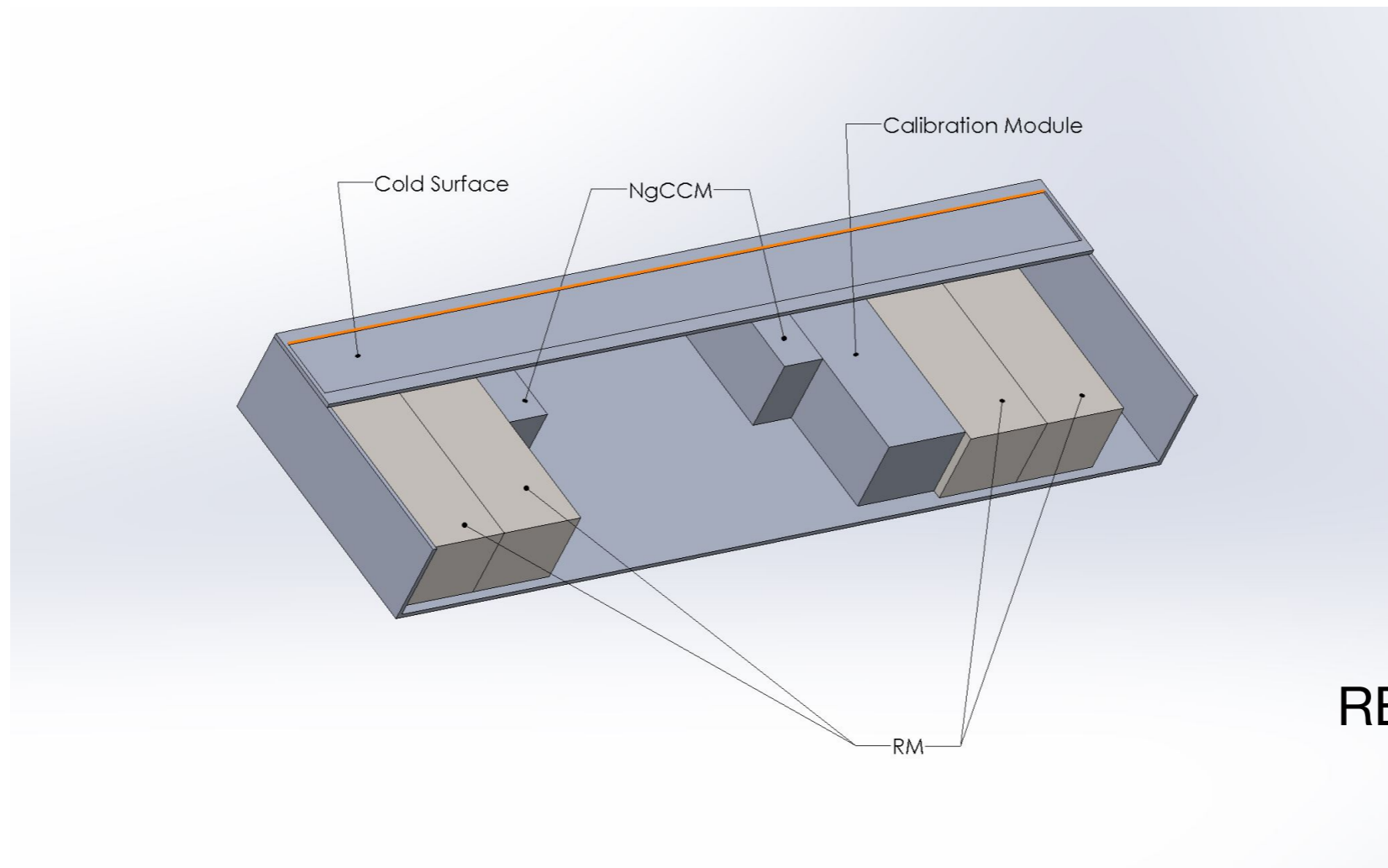
HB RBX Redesign

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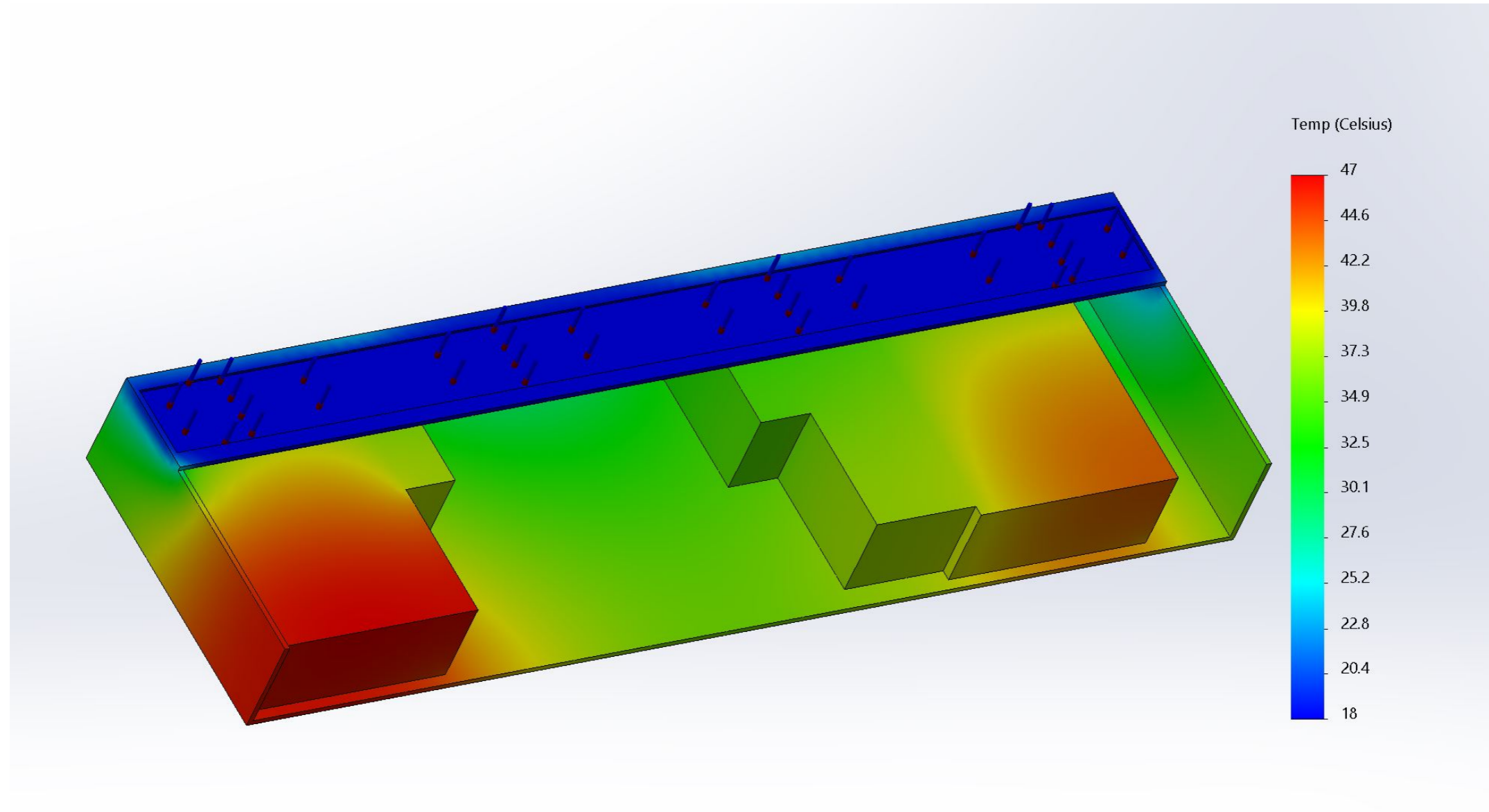
Oct 31, 2019

Objectives

- Propose a new RBX design to reduce temperature by 10 degrees:
- New mechanical engineer student (Ana Delgado) started working on modeling the RBX in ANSYS and run a thermal analysis.



RBX geometry being implemented in SolidWorks



A quick analysis using
SolidWorks

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- Propose a new RBX design to reduce temperature by 10 degrees:
 - New mechanical engineer student (Ana Delgado) started working on modeling the RBX in ANSYS and run a thermal analysis.
 - For the moment, it seems that we are missing the exact dimensions of the copper tube (and bending).
 - Compare design with David et. al. USFQ to work together toward the best design.
- Setup a current RBX (power and cooling) at Florida Tech to measure temperatures and compare with simulation.
- Fabricate a prototype and test it at Florida Tech.