

DSG-Ansys R&D Meeting Minutes

Date: June 9, 2022

Time: 14:00 to 15:00

Attendees: Aaron Brown, Pablo Campero, Brian Eng, and Marc McMullen

1. NPS thermal analysis

Aaron Brown, Pablo Campero, and Marc McMullen

1. Working on CFD thermal simulation in Ansys Fluent to include heat exchangers fans
 - Had issues with the simulation of the fan blades' rotation
 - Simulation results showed high temperature values in the electronic volume
 - Changed simulation solver method from Simple to Couple
 - Ran simulation; preliminary temperature in the electronic volume was 23.88°C when the air through a fan flows at 10 m/s and 10°C
2. Working on NX-12 model that will include more details for the crystal blocks setup and heat exchanger
 - discussed how much detail allowed in model before meshing and implementation cause errors
 - Decided to leave the enclosure of the heat exchanger tubes as a solid bloc; will look into the Ansys Fluent settings to determine if a filter or porous option is available